

THE GOVERNMENT OF THE PHILIPPINE ISLANDS
DEPARTMENT OF THE INTERIOR
BUREAU OF HEALTH

ANNUAL REPORT OF THE
BUREAU OF HEALTH
for the PHILIPPINE
ISLANDS

FOR THE FISCAL YEAR ENDED
JUNE 30, 1912

BY

VICTOR G. HEISER

DIRECTOR OF HEALTH

*Passed Assistant Surgeon, United States Public Health
and Marine-Hospital Service*

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ANNUAL REPORT OF THE BUREAU OF HEALTH.

DEPARTMENT OF THE INTERIOR, BUREAU OF HEALTH FOR THE PHILIPPINE ISLANDS,

Manila, July 16, 1912.

SIR: I have the honor to submit herewith the following report, which is a statement, in general terms, of the health and medical work carried on by the Bureau of Health for the year ended June 30, 1912, and the thirteenth annual report of this division of the Government of the Philippine Islands.

THE YEAR IN BRIEF.

During the year the sanitary and medical organization has been severely tested, and has emerged from the trial with a record that is all that the originators of the plan could hope for. At no other time have the Philippines been so seriously threatened by the invasion of diseases like cholera, plague, and smallpox from near-by countries, and by outbreaks of disease resulting from the most unusual drought which prevailed in the Philippines during the year, yet, in spite of this fact, the health conditions have been better than those experienced at any time since American occupation. Tremendous strides have been made in bringing medical and surgical relief to literally thousands of persons who have never before had an opportunity of enjoying blessings of this kind.

THE OUTLOOK.

On account of the state of the public health at the close of the year, and the satisfactory conditions under which the new year is begun, it is believed to be safe to state that we are on the threshold of the time when the expectancy of life in the Philippines will compare favorably with that in other parts of the world, and that it will be safe for commercial enterprise to make its calculations for the future without fear that disastrous epidemics with their attendant quarantine and other restrictions must be reckoned with.

REDUCTION IN MANILA'S DEATH RATE BY THE USE OF MONTALBAN WATER.

ONE ASPECT OF ITS ECONOMIC VALUE.

The increase in Manila's death rate attributed to the use of water drawn from the Mariquina River instead of from the Montalban Reservoir is fully discussed elsewhere in this report. It may now be of interest to review the decrease in the death rate of Manila since the Montalban supply became available. During the five years preceding 1908 the average number of deaths from the following diseases was:

Dysentery	339
Diarrhea and enteritis under 2 years of age	277
Diarrhea and enteritis over 2 years of age.....	343
Diarrhea and chronic enteritis.....	228
Convulsions of children.....	1,921
Meningitis, simple	450

During the fiscal year 1911, or two full years after the Montalban water became available for the city of Manila, and before the recent disturbances due to the breaking of the pipe line and the long drought were factors in the situation, the number of deaths was as follows:

Dysentery	132
Diarrhea and enteritis, under 2 years of age	285
Diarrhea and enteritis over 2 years of age	144
Diarrhea and chronic enteritis	118
Convulsions of children	500
Meningitis, simple	71

From the foregoing it will be seen that there were 300 per cent more deaths from dysentery previous to the installation of the water supply; 11 per cent more from diarrhea and enteritis, under 2 years of age; 230 per cent more from diarrhea and enteritis, over 2 years of age; 380 per cent more from convulsions of children, and 450 per cent more from simple meningitis. Before proceeding further with the analysis of these figures, it may, perhaps, be proper to state that typhoid fever has not been included because the statistics are so notoriously unreliable, that any deductions made might be very misleading. Cholera has not been included because it is reasonably certain that the cholera that occurs in Manila is not directly connected with the public water supply. Convulsions of children, although not ordinarily regarded as an intestinal disease may well be classified in this category, under the conditions which exist here. Simple meningitis is included among intestinal diseases, not because it is believed to be connected with them, but because

several years ago an extensive series of autopsies showed that, with the exception of a few cases of tubercular meningitis, all the cases that were so diagnosed were cholera, dysentery, or some other form of intestinal disease.

From the foregoing then, it will be apparent that the total number of deaths in 1911 from the diseases above mentioned, was 1,195, and the average total number of deaths annually during the five years preceding, was 3,558, so that it is seen that there were 300 per cent more deaths from these diseases prior to 1908 than there were during the year 1911.

The value of a human life has been variously rated. Professor Irving Fisher estimates that, in the United States, a human life, at 5 years of age, is worth \$950, and steadily increases in value until, at the age of 30 years, it is worth \$4,000. As the earning capacity in the Orient is no doubt less than in the United States, it is estimated that a fair average would be \$500 per life. If then, there were, as shown above, 2,363 lives saved, and estimating their value at \$500, or ₱1,000 each, it will be apparent that for one year alone the saving amounts to ₱2,363,000.

LOW DEATH RATE AMONG GOVERNMENT EMPLOYEES.

The death rate among Government employees for the year was 4.84 per 1,000. Even when reasonable allowance is made for the lack of very old people and young children among these employees, and due consideration is given to the fact that they are, for the most part, preferred risks, yet the death rate is still exceptionally low, and believed to be less than that for any other tropical country. An interesting feature in connection with the death rate is the fact that among Americans it was 7.71 per 1,000, while among Filipinos, it was 3.68 per 1,000. It is believed to be reasonable to infer that the better living conditions which prevail among Government employees, and their knowledge of hygiene, largely account for the death rate among Filipinos in the Government service being so much lower than it is among Filipinos of the general population. This low death rate also furnishes an idea of what might be accomplished among the general population if the living conditions among them could be made as favorable as they are for Government employees. These figures apply to 2,852 Americans and 7,063 Filipinos, and when it is remembered that the death rates given above have remained substantially the same for the past three years, it is believed that the figures give an excellent idea of the expectancy of life in the Philippine Islands.

FREE QUININE AND MALARIA.

In the latter part of 1909, the Bureau of Health, with a view to relieving distress, and the hope of reducing the death rate from malaria in the Province of Ambos Camarines, distributed gratuitously one-half million 5-grain doses of quinine sulphate. It is interesting to note that the death rates from malaria before and after the quinine distribution were as follows:

Year.	Quarter.				Total.
	First.	Second.	Third.	Fourth.	
1907	189	269	208	321	987
1908	137	225	159	232	753
1909	168	160	247	202	777
1910	129	133	168	131	561

In 1911, when there was no further gratuitous distribution of quinine, it will be noted that the deaths from malaria immediately increased, as is shown by the following figures:

First quarter, 1911	170
Second quarter, 1911	196
Third quarter, 1911	142

It is rather a crude experiment, and it is of course, impossible to say whether the distribution of the quinine influenced the death rate as favorably as the figures seem to indicate, or whether it has been due to other causes operating during that time. There is no doubt, however, that an enormous amount of distress and suffering were relieved.

FAR EASTERN ASSOCIATION OF TROPICAL MEDICINE.

The second biennial congress of the Far Eastern Association of Tropical Medicine held its session at Hongkong under the presidency of the Honorable J. M. Atkinson, M. B., with F. Clark, M. D., as secretary, from January 20 until January 27, when it adjourned to meet again at Saigon two years hence. The official delegates from the Philippine Islands for the Civil Government were the Director of Health and the Director of the Bureau of Science. The United States Army detailed three of its medical officers, and the United States Navy one medical officer, to attend the congress. There were present delegates from Japan, German China, Shanghai, Hongkong, Macao, Canton, Indo-China, Straits Settlements, Federated Malay States, India, Ceylon, Australia, and Java.

The influence of the congress in promoting friendly relationships between the different Oriental countries is of inestimable

value and has proved also of great value in promoting the interests of sanitation throughout the Orient.

The delegates from the Philippine Islands are under very considerable obligations for the many courtesies, both official and private, which were extended to them during their visit to Hongkong.

The two points of paramount interest to the Philippines which were discussed at the congress, were the questions of beriberi and of quarantine. The final results of the discussion which ensued upon these subjects are embodied in the following resolutions which were almost unanimously passed by the congress:

That the accuracy of the opinion of this association recorded in 1910 has received further and more complete confirmation by investigators in Japan, China, French Indo-China, the Philippine Islands, Siam, Netherlands-India, the Straits Settlements, and the Federated Malay States, namely, that beriberi is associated with the continuous consumption of white (polished) rice as the staple article of diet.

It is, therefore, again desired to bring this opinion to the notice of the various governments concerned, and to recommend international action.

That the resolutions adopted at the last congress be amended to read as follows:

"(1) To have a definition of the 'status sporadicus' and a common standard for the term 'epidemic' when making reports to, or imposing quarantine against, each other.

"The following definitions are submitted for consideration: 'Status sporadicus' in respect of any communicable disease means the existence in a place, within the next preceding fourteen days, of a case or a case or cases of that disease, not definitely traceable to an imported case.

"('Status epidemicus': plague, cholera, smallpox, yellow fever, typhus exanthemicus, trypanosomiasis, or other communicable diseases shall be considered to be epidemic in any port, place or defined locality, when after the first telegraphic report thereafter shall show the occurrence of an average daily number of three cases, exclusive of cases imported into or originating in a quarantine station.

"(2) To circulate weekly return of plague, cholera, small pox, yellow fever, typhus exanthemicus, trypanosomiasis, and also of plague in rodents, among the signatories; also telegraphic reports on the first occurrence of any of these diseased in a clean port or territory.

"(3) To issue a bill of health to all outgoing vessels proceeding to a port of another signatory. Such bill of health shall (inter alia) state the facts as to the existence and prevalence of quarantinable disease in the port, place, or defined locality; and further, shall contain such information as may be desired or deemed necessary by any signatory, to enable such signatory to estimate the sanitary risk from the arrival of the vessel in its (the signatory's) ports.

"(4) To report by telegram to the country concerned the departure of an infected or suspected ship (as defined in the Paris Convention) which may intend to proceed to any port in territories of another signatory, and to indorse the bill of health of the said infected or suspected ship with a

full account of measures taken to disinfect or otherwise deal with the said vessel.

"(5) To meet point (2) raised by Doctor Uthermann, the following procedure is suggested, viz: That in respect of any vessel leaving a plague-infected place, or carrying persons or suspected cargo from such a place (a place where there is plague in man or rodents), it is considered that no subsequent disinfection or fumigation should be imposed on the vessel at any port of call, if it can be shown (a) that the vessel has been properly treated for the destruction of rats and other vermin; (b) that approved measures of inspection or examination, and personal disinfection, and disinfection of effects have been carried out in respect of all persons on board such vessels; and (c) of specially objectionable classes of cargo (to be scheduled) have been rejected or properly disinfected before shipment. Provided further, that it is understood that no evidence of plague is discovered on board in man or rodent at any port of call.

"(6) In the opinion of this association it is most desirable that the recommendations of the International Bureau of Hygiene, which met at Paris in 1910, be given effect to, namely, that effective measures should be carried out to destroy rats on board vessels trading with plague infected countries independently of the existence of plague among such rats."

In connection with the foregoing it is of interest to observe that the experiences had with regard to the causation of beriberi in the Federated Malay States and the Philippine Islands, a portion of which were reported at the meeting held in Manila, in 1910, were confirmed by observers from practically all countries in which rice is used as the staple article of diet. The additional confirmatory evidence that polished rice is associated with the cause of beriberi, which has been accumulated in the Philippine Islands since the Congress met, makes it all the more imperative that some international action should be taken with the view to devising ways and means by which the ravages of this preventable disease may be effectively combated.

PRIMERA ASAMBLEA DE LOS MÉDICOS Y FARMACÉUTICOS DE LAS ISLAS FILIPINAS.

This newly organized association of Filipino physicians held its meetings in Manila from February 3 to 9. There were over 400 members in attendance. The Director of Health by special invitation read a paper entitled "Typhoid fever in the Philippine Islands from a sanitary standpoint."

In the future it is the intention of this Bureau to call an annual convention of its district health officers to meet in Manila at the same time that the Assembly meets. This will give them an opportunity to take advantage of both meetings at a minimum expense and no doubt will have the effect of increasing the attendance.

MARITIME QUARANTINE.

While the control of the maritime quarantine at the ports of entry to the Philippine Islands is conducted by the United States Public Health and Marine-Hospital Service, and therefore this Bureau is not directly concerned, yet, the dangerous, communicable diseases which were encountered on board vessels are of considerable interest to the Philippines and it was thought it might be of interest to record the following:

April 7, steamer *Loongsang* arrived in Manila from Hongkong and reported that a death had occurred in a Chinese member of the crew. Upon autopsy at the San Lazaro Morgue it was found that the cause of death was pneumonic plague.

April 6, a death was reported on the steamer *Zafiro*, after this vessel had been in port over twenty-four hours. Investigation showed that the victim on the night preceding his death was apparently in good health, but he was found dead the next morning at 6 o'clock. The autopsy showed that death was due to pneumonic plague.

A similar case was detected on a vessel arriving at Cebu during November.

In view of the developments with regard to cholera carriers in recent years it was thought advisable to examine steerage passengers from China and Japan to ascertain whether any of them were cholera infected. On June 30 a Chinaman from Hongkong was undergoing quarantine at the Mariveles quarantine station and upon examination was found to harbor virulent cholera organisms. Apparently the man was in good health.

SANITARY INSPECTORS.

Due to the fact that no epidemic disease has made its appearance in Manila during the year, it has been possible for the inspection force to devote more time to routine work, consisting of house inspections, the correction of insanitary conditions, and the enforcement of the Manila ordinances relative to public health matters. At the same time certain of the inspectors have been specializing along particular lines. For instance: There is an assistant sanitary inspector over each group of men composing the mosquito-exterminating gang, with an American sanitary inspector having supervision over the entire work. Numerous assistant sanitary inspectors have been detailed with the disinfecting squad for the purpose of becoming thoroughly familiar with practical disinfection and disinfectants. During the month of June, 25 assistant sanitary inspectors have been

especially engaged in the trapping of rats, in addition to making their regular house inspections. An American sanitary inspector has been detailed with the Board of Food and Drug Inspection, and devotes all his time to matters relating to the Food and Drugs Act. From time to time assistant sanitary inspectors have been detailed in the provinces to carry on the work of vaccination in places where the province and municipalities were too poor to employ local vaccinators. In this way the Island of Masbate was vaccinated during the year, also the Island of Busuanga. Vaccination was also performed in some of the municipalities of Bataan and Rizal Provinces.

For more than a year a senior assistant sanitary inspector of the Bureau of Health acted as president of the municipal board of health for Mariquina, at which time under his direction, and by assistant sanitary inspectors of the service, the entire population of the Mariquina Valley was vaccinated, effectively stamping out a small outbreak of smallpox appearing in that valley. The services of the senior assistant sanitary inspector mentioned above being needed by the Bureau of Health, he was withdrawn during the latter part of the year.

An American assistant sanitary inspector and two Filipino assistant sanitary inspectors were detailed for duty in the city of Baguio. Six assistant sanitary inspectors were detailed to Antipolo during the fiesta to supervise the sanitation of the place under the district health officer. A sanitary inspector was detailed at Iloilo for a short period to give instructions to the mosquito-exterminating gang employed by the municipality of Iloilo. A sanitary inspector and assistant sanitary inspector were detailed to the Culion leper colony to take charge of the leper sanitary inspectors, who are employed with same duties in the leper colony as an assistant sanitary inspector in the regular service of the Bureau of Health. During the small outbreak of cholera which occurred in Union Province assistant sanitary inspectors were detailed to work under the district health officer and the results obtained were prompt and satisfactory.

During the year there has been held a weekly inspection of each health station, including the personnel, at which time the Filipino inspectors are quizzed on the subjects pertaining to their work, such as the Manila ordinances, regulations of the Bureau of Health, and general subjects, such as disinfection, rat catching, water analysis, etc., and after each quiz a lesson is assigned for the coming week.

The Bureau is at present compiling a book to be known as

a Manual or Handbook for Assistant Sanitary Inspectors of the Bureau of Health, which will be in a way a primer of hygiene and sanitation but will probably be somewhat more technical than a similar book intended for the instruction of scholars in the public schools, and will in addition mention all of the ordinances and regulations with which the assistant sanitary inspectors have to be familiar.

The standard of requirements for admission to the service has been increased, applicants being marked according to their ability to read, write, and speak English or Spanish, their general appearance as to neatness and intelligence, their experience in health work, and their experience in other lines of work, in addition to passing a thorough physical examination. As is the experience with other Bureaus, there are now in the employ of the Bureau several assistant sanitary inspectors suffering with tuberculosis; and while heretofore there has been no physical examination of applicants there is always the chance that they may have contracted the disease in line of duty, and the Bureau hesitates to discharge these men, though they may not be capable of performing a full day's work. When the Manual is ready no assistant sanitary inspector will receive promotion until he is thoroughly familiar with its contents.

HOSPITALS AMONG THE WILD TRIBES.

The influence which the extension of medical and surgical relief and the establishment of modern hospitals has had in bringing the wild man to the ways of civilization can probably never be accurately estimated. It can scarcely be successfully gainsaid however, that the policy of winning the wild man through peaceful means had its most powerful weapon in the feeling of gratitude brought about by the ministrations of the doctor. The progress along these lines has been phenomenal. Where, a few years ago, wild, head-hunting savages, roamed through the hills at will and indulged in their murderous practices on every hand, there now exist modern hospitals where their ailments are treated, and the doctor and nurse go about the country in security, ministering to their physical ills. The latest of these hospitals was completed and opened at Bontoc for the reception of patients during the early months of the present calendar year. The hospital is a modern, brick structure, of thirty beds capacity, with ample facilities for the treatment of out-patients, and with room for housing a portion of the personnel. Photographs of the buildings will be found in the appendix to the report.

In addition to the foregoing, dispensaries with a few beds each, where emergency cases can be treated, have been opened at Quiangan, Cervantes, Tagudin, Banaue, and Tuac. It is gratifying to report that all of these institutions are largely patronized, and are becoming well known throughout the length and breadth of the Mountain Province.

Salvarsan has been successfully used during the year, in the treatment of a disfiguring skin disease known as yaws, and the use of this drug has been largely responsible for making hosts of friends.

In Agusan a temporary hospital at Butuan was opened and has rendered considerable aid to the people of that district. Owing to the restricted ground area which is available near the present hospital, it was decided not to build an addition to the same, as had been contemplated. It is now proposed to select a larger site, in a better location, and to begin the construction of a new hospital as soon as the necessary funds are available. In the meantime, the old hospital will be continued in service.

A small hospital and out-patient service is maintained at Bayombong, which serves, principally, the needs of the Christians there. The district health officer, however, has made a number of trips among the Ilongots, and has extended to them considerable medical relief.

SANITATION AMONG THE WILD TRIBES.

Sanitation among the wild tribes has also made most noteworthy progress. In many of the towns which are jointly occupied by Filipinos and non-Christians, much better sanitary conditions prevail than is the case in the average Christian town in the Philippines. In towns like Bontoc and Cervantes, for instance, the pail system is used, the daily collection of garbage is in effect, streets are regularly swept, modern market buildings have been provided, and yards have a neat tidy appearance.

Largely through the improved keeping qualities of the vaccine virus which is at present being used, but more especially due to the friendly relationships which exist between the wild tribes and the Government officials, it has been possible this year, to make considerable progress in vaccinating sections that were heretofore regarded as unfriendly. The records show that no less than 6,027 persons were vaccinated against smallpox during the year, and a number of outbreaks of smallpox were quickly controlled by the vaccination which had been done.

DEATH RATES AND APPROPRIATIONS.

Many facts brought out in this report furnish ample evidence to support the assertion that, with the expenditure of definite sums of money, proportionate decreases in the death rate can be brought about. In other words, sanitation is rapidly taking rank with the scientific professions like engineering, and reasonably accurate forecasts can be made with regard to the state of public health, provided definite sums of money are available and sanitary recommendations are intelligently applied. For instance, it can now be stated with reasonable certainty that any community in the Philippine Islands which has been using a polluted surface water, can have its death rate reduced from 10 to 50 per cent for each thousand inhabitants by making good artesian water available and having it used by every resident of such a community. Again, it can be stated that in any community which has been properly vaccinated, at worst, only a few deaths from smallpox can occur, and it can be stated with equal certainty that in a community where persons are not vaccinated and smallpox makes its appearance among them, a mortality of from 25 to 50 per cent will result among the persons who are stricken with the disease.

STERILIZATION OF WATER BY THE ULTRA-VIOLET RAYS.

The Governor-General has authorized the expenditure of ₱4,500 from the sewer and waterworks bond issue, as a fund for the purchase of an experimental sterilizing plant to determine the effect of the ultra-violet rays upon bacteria, amœbæ, and other germs contained in the Manila drinking water.

The small experimental laboratory plant has proved very satisfactory, but before adopting this system it is believed to be advisable to test it upon a larger scale, and it was with this end in view that the present course was decided upon.

It will perhaps be remembered that in previous reports it has been pointed out that all filters which have been tried up to the present time have been unsuccessful in preventing the passage of amœbæ, and, in view of the fact that all surface waters of the Philippine Islands, unless they are either strongly chemical or thermal, contain amœbæ, and since it has not yet been definitely ascertained whether these amœbæ are pathogenic or not, it will be apparent that none of these filters could be recommended for the Manila water supply. The preliminary

tests made with the ultra-violet ray show that it destroys not only the bacteria in the Manila water but the amoebæ as well, and gives promise that a satisfactory method of sterilizing water on a large scale has at last been found.

CEMETERIES IN MANILA.

In order to discourage the opening of additional cemeteries in Manila and to reduce the number now in use a committee composed of the superintendent of sanitation and transportation, the city engineer, and the Assistant Director of Health, was appointed to study this question and to make a recommendation with regard thereto. The committee decided that it would be desirable both from the sanitary and the esthetic standpoint to close, after a certain period, all of the cemeteries within the boundaries of the city of Manila and to use as burial grounds only the Cementerio del Norte and another cemetery to be established in the southern portion of the city. The Cementerio del Norte covers a very large area, is beautifully kept, and is quite large enough to accommodate all the burials in the city of Manila for some time to come, but due to the fact that those living in the southern portion of the city would be inconvenienced by having to travel a great distance to bury their dead, it was deemed desirable and necessary that a second cemetery be established in the southern part of the city. The Municipal Board has approved the recommendations of the committee and as soon as this second cemetery is ready for burials all other cemeteries within the boundaries of the city of Manila will be closed.

PROGRESS IN THE PROVINCES.

One of the most gratifying results attained by the Bureau during the year was the large amount of progress in sanitary work which has been made in the provinces of the Philippines. Heretofore, much of the effort of the Bureau has necessarily been directed toward improving conditions in Manila. It was obvious that, until Manila, which is the largest and most important distributing center of the Philippines, could be freed from the dangerous, communicable diseases, there would be small use in attempting much work outside of Manila. A few years ago, however, it was possible to concentrate the efforts of the Bureau upon the improvement of sanitation in the provinces, and the campaigns of education which have been carried on have been remarkably successful. In many places, where heretofore only opposition or complete apathy met the efforts of the sanitarian, a complete change of attitude has taken place, and sanitary measures which were spurned heretofore, are, in

many instances, now welcomed. The success of this improvement can be largely attributed to the coöperative work among the different Bureaus of the Government. The Bureau of Education, through its efforts in the schools, the Executive Bureau, and the Bureau of Public Works, in promoting work in connection with the installation of artesian wells, the building of new markets, drainage systems, and water supplies, have been largely instrumental in bringing about the friendly and helpful attitude which this Bureau has been so earnestly striving for. On account of the large amount of medical relief now extended to the masses by the Bureau of Health, they are coming to regard it as their friend instead of an agency of the Government meant to interfere with their personal liberties.

AMBULANCE SERVICE.

The electric ambulance service for the Philippine General Hospital compares favorably with that of the larger cities of the world. These ambulances are used mostly in doing work connected with the hospital but, on account of the lack of ambulances in Manila, they have often been used for the use of other patients when they could be spared. Additional motor ambulances, for dangerous, communicable diseases, have been ordered, and it is hoped they will soon be in service.

THE BAGUIO SEASON.

The custom of transferring the seat of Government from Manila to Baguio has now been firmly established, and practically all of the Bureaus had their headquarters there during the period from the latter part of February until the early weeks of June. Owing to the energetic efforts of the director of athletics, practically all of the employees who were stationed there this year took part in some form of outdoor physical exercise, and there is every reason to believe that the physical condition of the great majority was considerably improved thereby. The Bureau of Health took advantage of the opportunity offered by so many employees being stationed in Baguio, to give a number of lectures on popular health subjects. During the early weeks at Baguio, considerable distrust in the climate was felt because of the presence of bacillary dysentery, but, when the specific cause became definitely known, and when it was learned that the disease was no more common at Baguio than in other parts of the Islands confidence was largely restored. A detailed report of the dysentery at Baguio will be found in another portion of the report.

TENEMENTS AND LODGING HOUSES.

The requirement that lodging houses should have a license showing the number of persons authorized to be harbored in the house, and that this license should be hung up in a conspicuous place, is still being enforced, and is gradually bringing about a relief from the overcrowding which was so prevalent a few years ago. Tenement houses are also required to have a caretaker, and through him, it has been found in actual practice to be a much more simple matter to enforce sanitary regulations, as, with a person in charge, there is someone to hold responsible when sanitary regulations are being violated.

COURT DECISIONS.

The status of sanitary authority in the city of Manila has been considerably disturbed by certain decisions of the courts, based on the validity of the Revised Ordinances which superseded and included the Sanitary Code of Manila.

The question involved is whether the publication in newspapers of the original ordinances upon which the Revised Ordinances are based is sufficient or should the Revised Ordinances have been published for the time and in the manner prescribed by law for original ordinances. The Municipal Board of the city of Manila holds that the Revised Ordinances were legally enacted while certain of the courts have decided that they were passed without due publication, hence are void. This and other questions affected by court decisions shake the stability of the working system of the Bureau, create doubt and distrust and seriously interfere with the enforcement of sanitary orders.

LIFE INSURANCE RATES.

There has been great activity along life insurance lines during the past year. One new local company has been formed, and several others have come to occupy the field from other countries. As the rates for policies are the same as in the United States, it goes to show that the actuaries are becoming more and more sanguine that the expectancy of life in the Philippines is much the same as in countries of the temperate zone. It also shows that men of money have sufficient confidence in the Government and in the sanitary administration of the Philippines to make large investments, and take their chances on the development of the country.

PUBLIC BATHHOUSES AND LAUNDRIES.

Public bathhouses and laundries are sanitary utilities, the need for which has been recognized by every official who has had charge of public health matters since the early period of American occupation, but, so far, neither of these projects has come to realization. In the sanitary barrios which have been so extensively constructed and with such favorable results in many portions of Manila, provision was made in each for the installation of a public bath, and a public laundry house, but, for lack of funds, it has been impossible to have them installed. It is hoped, however, that during the present year this project will come to realization.

THE MANILA MILK SUPPLY.**PASTEURIZATION NECESSARY.**

During the past five years the Bureau of Health has made earnest efforts to improve the fresh milk which is delivered to consumers in the city of Manila. As long as rigid inspections are constantly made, and offenders against the regulations frequently brought before the court, there is considerable improvement in the milk supply, but even with this extraordinary amount of supervision the milk cannot be regarded as satisfactory. Milk obtained from cows kept under sanitary conditions, and sold in a cleanly manner within a reasonable time, contains a minimum of 35,000 bacteria per cubic centimeter. In accordance with the conclusions of the New York Milk Committee the minimum number of bacteria a safe milk should have is 10,000. In view of the fact that under the best conditions the Manila milk exceeds the safe margin by 25,000, and since the ordinary milk frequently contains as many as 60,000,000 bacteria per cubic centimeter, and nearly always has pathogenic organisms as well, it is evident that the plan at present being followed should be substituted by another which will yield better results. With this end in view, at the close of the fiscal year negotiations were under way with the Society for the protection of Infants (Gota de Leche) for the use of their sterilizing plant, and if satisfactory arrangements with regard thereto can be made, it is proposed to recommend an ordinance which will make it compulsory, before milk can be sold or offered for sale in the city of Manila, to have it pasteurized under the auspices of the Bureau of Health. If regulations are then enforced which will

compel its sale within a reasonable number of hours after Pasteurization has taken place, it is thought that a great improvement can be brought about in the milk. In view of the fact that many of the samples contain pathogenic bacteria in large numbers, there can be small doubt that the Manila milk is one of the factors in maintaining a high morbidity and mortality. Pasteurization will also afford an opportunity for detecting with greater frequency the common adulterants like coconut oil, rice flour and other substances which are so frequently added to Manila milk.

INCREASED USE OF IMPORTED MILK.

Probably one of the most satisfactory developments in connection with imported milks is the fact that a whole milk of excellent quality can now be purchased throughout the Philippines at a rate which compares favorably with fresh milk of an equal quality sold in the United States. Since the passage of the Food and Drugs Act there has been steady improvement in the quality of imported milk and the method of its preparation, so that it is becoming difficult to distinguish the difference between that and good fresh milk. On account of the fact that the milk can be purchased in sealed containers of a size that is suitable for use at a given time, and since it keeps for practically an indefinite period, such milk furnishes a most economical food. The steady increase in the use of imported milks is shown by the following table furnished by the Insular Collector of Customs:

Importations of milk.

Years.	Condensed.		Fresh.	
	Quantity.	Value.	Quantity.	Value.
	<i>Pounds.</i>		<i>Gallons.</i>	
1908.....	3,070,028	\$247,866
1904.....	3,233,052	251,261	8,804	\$2,494
1906.....	3,018,376	233,667	8,537	3,778
1908.....	3,776,761	284,496	34,879	11,428
1907.....	3,646,264	289,789	69,080	27,435
1908.....	4,147,413	349,307	81,669	36,627
1909.....	4,752,733	406,507	113,397	47,233
1910.....	6,871,129	475,882	149,556	49,314
1911.....	9,507,963	623,541	145,322	66,831
1912.....	11,411,690	765,548	267,962	110,014

GOATS AS A SOURCE OF MILK SUPPLY FOR THE PROVINCES.

It has long been the endeavor of the Bureau of Health to introduce throughout the Philippine Islands the use of a satisfactory goat milk. To this end experiments have been conducted by the Bureau of Agriculture. One of the difficulties found in the way was the fact that the native goat gives a very small

quantity of milk, so that it would be commercially impracticable to use it, and the better goat-milk producers, like the Malta goats, do not flourish in this climate. In view of the foregoing, efforts have been made by crossing the native goat with the Malta goat, to produce a breed which would produce an increase in the quantity of milk and at the same time would thrive in this climate. These efforts have been only partially successful, and experiments are still under way. If this plan should eventually prove successful, it is believed that a milk supply could be made available for the use of the poorer people which it would be within their ability to pay for, and which would at the same time, furnish a satisfactory food which could scarcely help but have an important effect in reducing the infant mortality.

DEATH OF DOCTOR FREER.

Probably no man ever lived, himself not a health officer, who was more intimately connected with public health work than the late Doctor Freer. He was a member of the old Board of Health of the Philippine Islands until its reorganization as the Bureau of Health under the terms of Act 1407. His official position brought him in constant contact with the public health officials, and with public health problems. Sanitary science has been enriched by the labors of Doctor Freer, and will, in common, with all other branches of science in the Philippine Islands suffer because of his death.

The following obituary notice is taken from the Bulletin of the Manila Medical Society:

PAUL CASPAR FREER.

Born March 27, 1862, Died April 17, 1912.

PHYSICIAN, SCIENTIST, SCHOLAR.

Paul Freer was born in Chicago, on March 27, 1862. He received his M. D. degree from Rush Medical College in 1883 and the degree of Ph. D. from the University of Munich in 1887. During 1887 he was assistant in Chemistry in Owens College, England, and assistant in Tufts Medical College, Boston, 1888. He was called to the University of Michigan in the later part of 1888 as instructor in chemistry, was promoted to lecturer in 1889 and to professor of chemistry in 1890 and continued in this position until his services were secured for the Government of the Philippine Islands in 1901. He organized the Bureau of Government Laboratories at Manila in 1901 and was an active member of the Board of Health from 1901 to 1905.

In 1905 the Bureau of Government Laboratories was converted into the Bureau of Science and Freer was director of the bureau until his death. He was one of the organizers and was Dean of the Philippine Medical School which later became the College of Medicine and Surgery of the University of the Philippines.

He was organizer and editor of the "Philippine Journal of Science" and was a member of a long list of local, national and international societies and associations of learning.

His publications, which were numerous, will be outlined in a subsequent paper. They were contributions of a very high order of merit and covered a wide range of subjects. Chief among the subjects investigated was the action of sodium on ketones and aldehydes; closed carbon chains; phenyl hydrozones; tetrinic acid; esterification of halogen substituted fatty acid; formamid; organic peroxides and their germicidal action; reduction of nitric acid; tetramethylen; gutta percha; Philippine gums and resins; and tropical sunlight. His textbook of chemistry, although over ten years old, was of such a high order of merit that it still is used as a standard reference book by many students of the subject.

The brief outline of the subjects investigated, each of which represents a careful and exhaustive research and a definite contribution to the world's knowledge indicates love of research and thoroughness, two of the strongest points in the character of this distinguished investigator. His work on tropical sunlight, which had occupied much of his time during the last five years and much of which was unpublished at the time of his death, constitutes one of the most important researches of recent years and could he have been spared but a short time longer should have won him the "Nobel Prize."

Like most other truly great men Paul Freer's most useful work is not to be found in his publications but in his influence upon other men. No other man in the Philippine Islands has conferred so much honor on the medical profession. This "many gifted" man of science was the teacher, friend, and advisor of every investigator of the country whether the subject of his work was medical, chemical, botanical, or what not. He constantly gave much of his time to encouraging and helping younger men with their problems and many of the men who have won distinction in various fields of research in this country freely accord much of the credit to the help and advice of Dr. Freer.

We, his friends, colleagues and pupils are panic stricken at his absence and men of contemporary science the world over will mourn with us in the loss of one of the great men of the day.

LABORATORY DIAGNOSIS.

Eternal vigilance is the price of success in public health work. The early recognition of the presence of disease in a community may prevent an epidemic, and save thousands of lives, to say nothing of the outlay of money and detriment to business. In order that the facilities of the Bureau of Science might be made available in the remote places of the Philippines, and to secure uniformity in the method of submitting specimens, the following instructions have been prepared by the Bureau of Science and put in operation by this Bureau:

BLOOD.

This should be smeared evenly on a glass slide and allowed to dry thoroughly. Several slides should always be sent, and

they should be separated from each other by a small piece of match stick at each end, the smeared surface in, and all the slides held together by a rubber band. They should then be well protected by cotton to prevent breaking and packed in a small box. Blood smears if thoroughly dry before packing should reach the Bureau in good condition.

SPUTUM.

Sputum for examination for tubercle bacillus will keep indefinitely without any preservative. It should be sent in a small bottle, preferably with a wide mouth, wrapped in cotton and put into a small box, or section of bamboo.

FECES.

Feces, if to be examined for the eggs of parasitic worms, should have added 4 per cent by volume of formaline.

Feces, if to be examined for the bacillus of typhoid fever or bacillary dysentery, should not have any preservative added, but should be put in a bottle, packed as above, and transmitted without delay.

Feces, if to be examined for cholera, a culture should be sent on agar, as described in the circular of directions relative to the use of agar culture tubes.

URINE.

A few drops of chloroform will preserve urine for chemical analysis only, but it makes the sediment unfit for microscopical examination. A saturated solution of boric acid may be used as a preservative or 0.3 to 0.4 gram of salicylic acid may be added to every 100 cubic centimeters of urine. Always state kind of preservative used.

INSECTS.

Chitinous insects such as fleas, ticks, mites, lice, and bedbugs, should be placed in 70 per cent alcohol in a small bottle and labeled with the locality, host, and date of collection.

Mosquitos and flies must be handled very carefully to avoid mutilating. Small pieces of cotton must be put at the bottom of a test tube or small bottle and the insect then dropped in and a small piece of cotton pushed down over it so that there will be a layer of cotton between or separating each insect. A few drops of chloroform may be put in as a preservative or a small piece of camphor and the bottle or test tube tightly stoppered.

BRAINS OF DOGS SUSPECTED OF HAVING RABIES.

When possible the entire head of the dog should be sent packed in ice. This is usually impracticable so the brain may be placed in glycerine in a bottle or jar and transmitted as soon as possible.

NOTE.—All glass bottles or test tubes must be carefully packed to avoid breaking. They must be well protected by cotton. A section of bamboo makes an excellent box in which to pack glass.

It is important to label all specimens with date, name of sender, kind of material, from what obtained, locality, and a specific statement as to what is to be looked for.

PRISON AND JAIL SANITATION.

In order to establish a system of sanitation for prisons and jails, a circular of instructions previously approved by the Director of Prisons was mailed to all district health officers who under Act 1487 are charged with the responsibility of the prison sanitation. The requirements of this circular being applicable to all civil prisons and jails in the Philippine Islands wherever located, the system of sanitation is made uniform.

Attention is invited to the following rules for the regulation of sanitary conditions in the provincial jails. District health officers will see that copies of these regulations are placed in each provincial jail and that they are complied with at all times; reports will be made to this office of all failures to conform to these rules:

On admission to the jail all prisoners shall be given a bath and change of clothing and those having any skin diseases or eruption or other evidence of illness shall report at once to the medical officer in attendance for examination and disposition.

All prisoners shall be required to bathe at least three times a week and shall not be allowed to drink any other than the drinking water supplied them at the jail. This water is to be kept in the closed tanks constructed for the purpose and to be drawn off only from the faucet.

Prisoners shall be allowed one-half hour to consume their meals, which must be taken at the place designated. No food is to be allowed them or in their possession at other times.

All prisoners shall be required to exercise daily unless excused by the surgeon.

Sick prisoners shall be reported to the surgeon at once.

All prisoners suffering from contagious or infectious diseases will be properly isolated, and after their removal the place of confinement shall be disinfected.

Each room shall be provided with spittoons and prisoners shall be prohibited from spitting on the floor or grounds. These spittoons shall be cleaned twice daily and disinfected at least once a week.

Dry-earth closets shall be provided with fly-proof screens for use during the day and one shall be installed in each room occupied by prisoners for use during the night; these closets shall be cleaned at least twice daily, and contents deposited in a pit at least four feet deep and covered with a plentiful supply of earth.

Buildings and grounds shall be cleaned daily, and after each meal, all garbage shall be thrown into the sea, burned, or buried in a pit at least 4 feet deep and covered with earth.

Food at all times shall be protected from fly infection. All dishes and utensils shall be cleaned immediately after use and kept protected from fly infection.

In the case of prisoners having, or suspected of having, tuberculosis a sample of sputum shall be sent to the Bureau of Health for examination.

THE BUREAU OF HEALTH EXPOSITION EXHIBIT.

The Bureau of Health was represented by a sanitary exhibit located in the center of the Insular Building of the Exposition covering an area 10 meters long and 7 meters wide, and an emergency hospital consisting of two large hospital tents located in the Carnival grounds near gate No. 2.

In the exhibit were displayed a modern bathroom, models of sanitary houses, municipal water filter, artesian wells, and a sanitary privy; also two relief maps in modeling clay of the barrio of Santa Monica showing its condition before and after it was reconstructed in accordance with the plan prepared by the Bureau; a small ice machine; an incubator; rat traps, sanitary bottles and carriers for milk, tuba, etc., the various kinds of rice, cases containing stuffed specimens of local rats, jars containing flies and mosquitoes, and a small disinfecting pump; while demonstrations of infant feeding were given by a trained nurse.

On the walls were displayed charts showing the birth and death rate of Manila by years for the past ten years, cycles of the fly and mosquito development, and the diseases transmitted by them, the rat flea, rat guards for vessels, statistics of plague and cholera, deaths from beriberi, tuberculosis prevention, photographs of infants properly and improperly cared for, and of a number of cases of plastic surgery.

The emergency hospital was equipped with cots, regimental and detachment field chests of the United States Army Medical Department, white enamel instrument case, washstands, bowls, chairs, and a sterilizer and during the hours at night when the crowds were greatest an ambulance was stationed there to facilitate the transfer of any serious cases to the General Hospital.

The plumbing display consisted of a modern tiled bathroom

with enamel metal siding, bathtub, shower bath with curtain, frame and base to catch the water; low tank flush water-closet, with white enamel metal seat, washstand and foot bath, together with traps, drains, and other fittings for sinks and drains.

The sanitary houses were models constructed by the division of sanitary engineering and demonstrated the unit idea to be followed in tenement-house construction, each house being separated from the adjoining one by a party wall and having its own kitchen, water supply, water-closet, and drainage, with galvanized-iron roofs and gutters and free through ventilation from front to back of house, this being secured by large double opposing windows in front and back walls, as well as large openings in all cross sections of rooms to facilitate the free passage of air through all parts of the house. Each unit has its own back yard entirely fenced in by a closed type of fence, while the part devoted to the kitchen, etc., is a separate part of the house connected by a short passageway covered or uncovered. Where upper and lower floors are occupied by separate families, each floor is a complete unit, the upper one having its own stairway leading to the street; the lower floor, excepting the passageway, being raised about one meter from the street level, the most striking feature being the unusually large window and door openings in both the front and back of the house. The model of the nipa house constructed especially for tuberculous persons gives a much larger comparative area of window space than is customary and the front and back of the house is provided with a large covered porch connected with the house by a door and intended for use as sleeping quarters, they being located on opposite sides and near the corners of the house, thereby affording shelter in inclement weather.

The municipal water filter consists of a large rectangular shaped cement tank divided across by a wall making two spaces, one about five times the size of the other. Into the smaller space, which serves as a settling bed or basin, the water enters and the overflow passes through pipes into the larger and filtering tank, this being filled with filtering mixture composed of sand and gravel; after passing through this the water leaves the tank at the opposite end and is supplied for use. This filter is also divided lengthwise by a concrete wall which permits cleaning of one half while the other half is in service. The settling basin is also provided with large valves to facilitate cleaning.

The model of an artesian well consisted of a vertical section of soil from the surface down through several strata of rock, gravel and sand, the upper or clay strata representing the polluted part, next the rock strata which acts as a barrier against contamination of the lower sections from which the water is obtained. A small glass pipe representing the driven well extended from the surface down to the gravel strata and through this a stream of water was kept flowing by syphonage. The perspective being a hillside illustrated how contamination of surface water occurred by natural drainage at a distance from and at lower levels than habitations.

MODERN SANITARY BARRIOS.

The relief maps of Santa Monica presented very forcibly the former condition of this as well as that of many barrios with their irregular location of houses, no provision for the disposal of excreta, no drainage, with the resulting swampy and filthy condition of the lower sections, no market, and a sluggish estero serving no other purpose than the collection of filth. The model one showed a regular arrangement of streets and alleys with a corresponding regularity and uniformity in house location, a sanitary market, midden sheds or dry earth closets systematically and conveniently distributed, each street and alley provided with a drain on both sides into which every house is required to drain, a cement base being placed under the kitchen or back part of the house collecting the waste water and carrying it directly to the street drain thus avoiding the collection of stagnant water on the premises, the street drains emptying into deep drains which communicate directly with the esteros which in turn are washed daily with tidewater, and, when practicable, fireplugs are also used to flush out these drains. Public hydrants also being located on the side of the street where their waste water is conducted directly into the drain from a cement base.

HOUSEHOLD ICE MACHINE.

The ice machine shown is of French make and occupies a space of but $1\frac{1}{2}$ meters long, 40 centimeters wide, and 1 meter high. It is intended for house use and its purpose in the Bureau is the preservation of vaccine virus at remote places in the provinces where vaccinating is being done and where ice or cold storage is not available. It is a vacuum machine,

the necessary lowering of the temperature being obtained by means of the extraction of heat and moisture by the use of sulphuric acid and an air pump.

RAT TRAPS.

The rat traps shown and adopted are of two kinds, one a cage constructed of bronze wire with entrance at one end and trap door in center partition and capable of holding a number of rats, the other, the wooden variety with a strong spring which upon being released by rat touching the bait strikes on the back of the neck, killing and holding it.

RICE SAMPLES.

The various grades of rice, both polished and unpolished (or milled and unmilled), were shown in bottles as well as the rice pericarp, and demonstrations were given in which the polished rice was shown to be the cause of beriberi, as proven by the results of an unpolished rice diet at the Leper colony at Culion, in jails, lighthouse stations, Government vessels and institutions, and among native troops of the United States Army, as reported by the Director of Health to the meeting of the Philippine Islands Medical Association, February 23, 1911, and in the reports of the investigations of Aron, Highet, Fraser, Stanton, Kilbourne, and DeHaan. The presence of four-tenths of 1 per cent or more phosphorus pentoxide is considered sufficient to class the rice as unpolished and acceptable.

The importance of this as a sanitary question is emphasized by the fact that in Manila alone during the year 1911 there occurred 1,500 deaths from beriberi which probably could have been prevented by the substitution of unpolished for polished rice.

PLAGUE RATS.

The case of stuffed rats contained specimens of the *Mus rattus* or black rat, *Mus norvegicus* or wharf or sewer rat, and the *Mus musculus* or house mouse, all found in the houses of Manila and capable of carrying plague, if exposed to the infection.

MOSQUITO SPECIMENS.

In specimen jars were displayed and undergoing development the larvæ, pupæ, and adult *Stegomyia persistans* or day mosquito; *Culex fatigans* or night mosquito; and the common house fly. The small disinfecting pump exhibited is used to spray rooms with a disinfectant solution from a bucket. This pump is small, simple, cheap, and effective, and, in addition to the purpose

designated, it may also serve as a small fire extinguisher, sprinkler, and spray pump for the application of whitewash.

SHIP RAT GUARDS.

The rat guards were displayed attached to a rope representing the guards en situ on a ship's line. These guards consist of a galvanized-iron disk not less than 3 feet in diameter to be attached at right angles to the line and held in place by four half tubes of the same material, two of which are attached to each side of the disk at its center and extending out about one foot. These tubes on closing clamp the line and are held in place by tying with a small line or rope yarn, this having been found to be an improvement over any fastenings of bolts or clamps owing to the constant losing of the latter. The disk is divided in half and at the outer edge of the two sections is held together loosely by a bolt, and to each one of these sections is attached the half of the tube on the outside, thus allowing the trap to be opened and closed *over* the rope instead of having to pass the rope through an opening, it further offering the advantage of ready adjustment to any size line; in case however the tubes cannot be closed sufficiently to clamp the line they should be wrapped or padded with burlap or rope yarn, one of the principal requisites being that no opening be left between the line and the guard. The guard is placed as near to the ship end of the line as possible, without damage to the guard, this to prevent rats from falling from the line to the water and swimming ashore, nor must they hang over a dock or shore. Every line from a ship to a dock or shore as well as all lines between ships and lighters must have a guard attached. These have been in use in Manila for the past four months and their initial cost is about ₱2.50 each. Ships making Manila a regular port of call provide their own guards made from blue prints furnished by the Quarantine Service, while others may obtain them from the custom-house. In addition to this precaution against the introduction of rats from plague-infected ports vessels are required to fend off at least 6 feet from a dock or pier and all gangways and chutes must be raised from sunset to sunrise, while lighters and cascoes must be removed from ship's side during these hours. Where the use of a rat guard is impracticable, as on lines running against the side of the ship or at too acute an angle to the ship, then tar must be applied daily to the line for a distance of not less than 6 feet from the ship. Ships may have one passenger gangway at night to the pier but it must be guarded by a watchman.

TUBERCULOSIS PREVENTION.

Tuberculosis prevention was shown by a series of comparative pictures with text:

ONE SIDE SHOWING:

1. The open and well-ventilated house with person sleeping on the covered porch.
2. Cigar making in clean room with cigars screened, stationary washstand, good ventilation, high work tables and spittoons.
3. Boys and girls playing lawn tennis and exercising in open air.
4. Eating meals on high table, clean and with knives and forks, food screened from flies, good ventilation.

THE OTHER:

1. A closed and poorly ventilated house, person sleeping inside on the floor with dirty clothes and cooking utensils drawing flies.
2. Low tables with girls seated on or near the floor, no spittoons, a small window affording but the poorest ventilation, and no screens.
3. Children playing inside the house on dirty floor, no ventilation, dog eating food scattered on floor and flies abounding.
4. Eating food with fingers on low table, no screening from flies, baby and dog playing together on dirty floor, and stable just outside with direct fly communication to food.

These illustrations were shown for the purpose of teaching:

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Sleeping with the windows open or outside means clean air, pure blood and good health. 2. Work and study in pure air make mind and body alert. 3. Play and exercise in clean open air. Keep out of doors as much as possible. 4. Eat clean nourishing food, protected from flies and dust. | <ol style="list-style-type: none"> 1. Closed windows mean dirty air, and poisoned blood. This means death. 2. Dirty dusty hot rooms are killing. Destructive to health and efficiency. 3. Indoor play and playing in dusty places is not healthful play. Exercise in dirty air is dangerous. 4. Dirty food kills thousands. Flies and dust contaminate food. |
|--|--|
5. Don't spit in public places. "No spit, no tuberculosis." Don't swap gum, apples, etc. There is spit on used gum. Don't put pencils or money in the mouth. There is spit on pencils and filth on money. Don't eat candy, fruit, or pastry that has been exposed to flies or dust; there are all kinds of germs on such. Don't sneeze or cough in another's face; don't let another infect you in this way.

INFANT FEEDING.

A number of photographs were displayed illustrating the marvelous improvement in babies as soon as they were put on a scientific method of feeding.

The part of the exhibit that attracted much attention was

the demonstrations on infant feeding-given by one of the Filipina trained nurses from the General Hospital. The points emphasized being cleanliness and caloric or scientific feeding as now taught and carried out in the General Hospital. The demonstration first showed the washing of the feeding bottles with clean cold water then with hot water and soap followed by placing in a clean pan and covering with clean cold water and boiling for twenty minutes. During this interval the nipples are to be cleaned by washing with clean cold salt water then place in a clean pan, cover with water and boil ten minutes, then place in clean cold water and cover with pan or cloth. The dishpan should be kept for this purpose only and the dish towels are to be washed in soap and water, rinsed in cold water and then boiled twenty minutes, rinsed twice in cold water and hung up to dry. Before handling any food for the baby the mother or nurse should carefully wash their hands and after nursing, the breast should be washed three times daily with soap and water and then rinsed with warm water.

For alkalizing the milk a 40 per cent solution of citrate of sodium is used in preference to lime water. In the event of the baby failing to gain in weight the average 25 to 50 grams daily, then a small quantity of cream should be added, although this is seldom required. It is sometimes necessary to add 5 to 10 grams of lactose to each feeding, especially with babies that have been fed on condensed milk, although as a rule plain sterilized milk without additions or dilution is all that is required.

THE CARNIVAL HOSPITAL.

The emergency hospital treated an average of about 15 cases daily, both medical and surgical.

The Bureau was represented by Dr. G. I. Cullen with Medical Inspectors Zach Laughlin and C. E. Norris on duty at the hospital, while two American and five Filipino sanitary inspectors were also detailed.

EMBALMING.

Undertakers in the city of Manila are required to pass examinations before a board appointed by the Bureau of Health before they are permitted to engage in embalming. Embalming is being regarded with increasing favor by the Filipino people.

In order to provide for the temporary embalming of patients who die at places where there are no trained embalmers this office has issued the following circular of instructions.

As it occasionally becomes necessary to embalm a body in order that it may be transported in good condition, or for other

reasons, the following instructions are issued to medical officers of the Bureau of Health in order that they may be conversant with the best method of preservation in such cases.

The first method given is one which should give perfect results and requires to carry it out more careful and complicated work than the second method, as well as an embalming fluid which has a somewhat more complicated formula.

The first method is as follows:

Formula for solution.

Solution of formaldehyde, U. S. Pharmacopœia.....cubic centimeters....	140
Sodium borate, U. S. Pharmacopœia (borax).....grams....	50
Phenolphthalein (8 per cent alcoholic solution).....cubic centimeters....	55
(Dissolved in alcohol, U. S. Pharmacopœia with the aid of heat.)	
Water a sufficient quantity to make.....cubic centimeters....	1,000

Directions for making.—Dissolve the borax in boiling water (using about one-third of the final volume) and dilute the resulting solution with about an equal volume of cold water. Then add the required amount of solution of formaldehyde, United States Pharmacopœia, and the phenolphthalein solution. Dilute to the required volume by the addition of water and mix well. Keep in stoppered containers.

By the addition of the alkali (borax), bleaching of the tissues by the formaldehyde is prevented, and borax will not cause a deterioration of the embalming fluid if kept any length of time before using. The phenolphthalein is added to give the solution an attractive appearance.

The amount of fluid to be used in embalming should be 15 per cent of the body weight, distributed as follows:

- Left femoral artery, 2 per cent injected toward the toes.
- Right femoral artery, 2 per cent injected toward the toes.
- Left brachial artery, 1 per cent injected toward the fingers.
- Right brachial artery, 1 per cent injected toward the fingers.
- One common carotid artery, 2 per cent injected toward the head.
- Same common carotid artery, 7 per cent injected toward the body.

It is unnecessary to drain off the venous blood. The orifices of the body should be plugged with cotton saturated with the fluid and the skin well smeared with vaseline.

Second method.—Where it is not possible to do the embalming with as much thoroughness as given above, the sodium borate and phenolphthalein may be left out of the solution and simply a solution of formaldehyde used, namely, 140 cubic centimeters solution of formaldehyde, United States Pharmacopœia, with water of sufficient quantity to make 1,000 cubic centimeters. Also, by injecting in the common carotid artery only, 2 per cent

of the fluid to go toward the head and the other 13 per cent toward the body fairly good results can be obtained. The orifices should be plugged as above and the body anointed with vaseline.

Method of injection.—Use about a 3-gallon bottle with two glass tubes, a long and a short one, passing through a rubber cork. The long glass tube passes to the bottom of the bottle and is connected to the canula which is inserted into the artery, by means of a rubber tube. The short tube passes but a short distance into the bottle, its lower opening being above the surface of the liquid. Its outer end is connected by a rubber tube to a bicycle pump. The pressure required for injection is about equal to the normal blood pressure.

The artery is slit or cut and the canula is inserted toward the direction in which the fluid is to flow and the ends of the canula held fast within the lumen of the vessel by a ligature. Upon withdrawal of the canula the same ligature is tightened and tied, thus preventing the fluid injected from escaping. The canula is then inserted in the same artery in the opposite direction and the same process repeated. Even though an artery is injected in but one direction both ends of the slit or severed artery must be tied. When apparatus such as is described above is not available, any syringe having a suitable needle or nozzle and suitable capacity may be used.

BUSINESS AND SANITATION.

As we gain in experience in the Philippine Islands, it becomes more and more apparent that there is scarcely a commercial venture of any kind the success of which is not intimately associated with good sanitation. It also augurs well for business interests that this is being more and more recognized. Large sugar estates, which have high malaria rates among their laborers, can scarcely hope to compete successfully with estates that have healthy workmen. Owing to the easy manner in which the native in the Tropics can gain a livelihood, it requires more than the ordinary amount of inducement to obtain labor from him, and when he learns that there is considerable risk of losing his life when working in sections in which the malaria death rate is high, it is only with greater expense and difficulty that he can be induced to work under those conditions.

Shipowners are rapidly coming to the point where fumigation of their vessels for the destruction of rats and vermin is requested, whereas, only a short time ago it was the custom to resist sanitary measures of this kind in every way. In this case, however, it soon became apparent to business men that several hundred healthy rats on board ship require a considerable

amount of food daily, and when it is considered that on ship-board all wastes are immediately thrown overboard, and that the rats therefore live almost entirely on new stores, it is apparent that the food which they eat is a very large item of expense.

The railroad companies in the southern islands have long since recognized that prosperity is intimately associated with the absence of epidemics, and therefore, they give all possible aid to the health authorities in stamping out dangerous, communicable disease. The Government itself is giving excellent object lessons of what may be accomplished in some branches of sanitation: for instance, the Iwahig penal colony, located on a plot of ground which had an evil reputation for pernicious malarial fever and was the financial ruin of several private companies that tried to raise sugar there on a large scale, was placed in good sanitary condition and the malaria reduced to a negligible minimum, and life and health are practically as safe there as in any other part of the Philippines.

One of the most satisfactory things in this connection is the fact that sanitary work of this kind has been carried out at a cost which would not be prohibitive from a commercial standpoint.

In other words, wherever sanitation has been introduced, it has ever been the policy of this Bureau to carry it out within a cost which would be commercially profitable.

THE NEW LAW WITH REGARD TO THE INSANE.

It is gratifying to report that the recommendation which has been so frequently repeated in the annual reports of the Bureau of Health for a proper law for the commitment and control of the insane, has at last borne fruit. The last Legislature passed Act 2122, entitled "An Act providing for the confinement of insane persons in Government hospitals or other institutions for the insane, and for the appointment of a board of physicians to inquire into the mental condition of persons alleged to be insane, when the evidence presented is not satisfactory to the court, or when there exists a reasonable doubt as to the condition of any patient confined in a hospital for the insane."

There now exists the necessary machinery for committing the insane in a manner that is more satisfactory from a legal standpoint. The difficulty encountered now, is the fact that funds are lacking for providing for those insane that require institutional care. According to the returns there are 3,543 insane persons in the Philippine Islands. Of these 360 are

confined in institutions. It is estimated that at least 2,000 more should have institutional care. In order to bring this about, an appropriation of ₱640,000 would be necessary for the erection of buildings and ₱500,000 for operation.

In order to place the insane law into effect, the following regulations have been prepared:

REGULATION 1. District health officers, medical inspectors, and other employees concerned are expected to become thoroughly conversant with the provisions of Act 2122 upon which these regulations are based, and ignorance of the provisions thereof will not be accepted as an excuse for any action taken under these regulations alone.

BUILDINGS AND CARE OF INSANE.

REGULATION 2. District health officers in the provinces, and medical inspectors in the city of Manila, shall, immediately upon receipt of these regulations inspect within their districts, all institutions or places wherein insane persons are confined, quartered or maintained, and shall submit immediately to the Director of Health a report, showing:

- (a) The sanitary condition of such institution or place,
- (b) The number of insane confined or maintained therein,
- (c) The provisions made for the sanitary maintenance of such insane in said institution or place—toilets, bathing facilities, etc.
- (d) The clothing provided, and the quantity and quality of food served to all insane persons confined or maintained therein.
- (e) The methods used to prevent the insane, or violently insane, from injuring themselves, and of escaping and injuring other insane or the public; pointing out defects with regard to: (1) location, construction, and maintenance of buildings with reference to sanitation; (2) insanitary and unsuitable conditions with regard to the care, maintenance or confinement of insane persons therein.

REGULATION 3. The inspection and report provided for in Regulation 2 shall hereafter be made semiannually, in June and December of each year, the report for each semiannual inspection to be in the hands of the Director of Health by not later than July 5 and January 5 for the half-year immediately preceding.

REGULATION 4. No buildings in which insane persons are confined, or are to be confined, shall be erected, changed or repaired until the plans therefor shall have been approved by the Director of Health.

RATES FOR THE MAINTENANCE OF INSANE AT SAN LAZARO INSANE HOSPITAL AT MANILA.

REGULATION 5. The terms upon which insane or apparently insane persons shall be admitted to Government institutions are as follows:

For maintenance in ward, ₱25 per month.

For maintenance in private room, ₱2 per day and upward, according to character of room.

COMMITMENT OF INSANE IN THE PROVINCES.

REGULATION 6. Insane persons, with their consent, or with the consent of their guardians, may be admitted to an institution for the insane without

an order of the court. In such cases, due application, with the necessary consents attached, will be forwarded to the Director of Health by the district health officer, who will certify whether or not the responsible persons are able to pay the cost of transporting the patient to the institution and of his maintenance therein. If the responsible persons are unable to pay, such cost will be charged or disposed of as provided for in Regulation 11.

No such cases will be sent to an institution for the insane without the approval of the Director of Health first had.

REGULATION 7. In all cases where it is for the public welfare or for the welfare of any person who is insane, and when such persons, or the person having charge of the patient, is opposed to his being taken to a hospital or other place for the insane, the district health officer shall, after satisfying himself as to the facts, forward a full statement of the necessities of the case to the Director of Health. If the latter shall approve, he will recommend an institution or place for the confinement of the insane person, and the district health officer shall then request the provincial fiscal to present the proper petition to the Court of First Instance alleging that the person is insane and praying that such person be committed to the institution designated by the Director of Health.

In cases of emergency, or, if the court is not in session, the district health officer shall so inform the Director of Health and state the necessity which he believes justifies immediate action, at the same time recommending a place where such insane persons should, temporarily, be confined. Should the confinement be ordered by the Director of Health, the district health officer will immediately request the provincial fiscal to make the necessary petition to the court when it shall next convene, and in the meantime, he shall forward to the Director of Health the full statement of the necessities and facts of the case, called for in the first paragraph of this regulation.

REGULATION 8. The district health officer shall make inquiry, and if it be within his knowledge that the confinement of an insane person involves the care of property or money, he shall so notify the provincial fiscal immediately in writing.

COMMITMENT OF INSANE IN MANILA.

REGULATION 9. All insane persons or alleged insane persons who are reported to medical inspectors in charge of city districts shall be immediately examined by them, and if they have reason to believe that such persons are actually insane, they shall call in consultation a medical officer of the Bureau of Health, and if they jointly believe such person to be insane and one who should be restrained, they shall, with the consent of such insane person, request the Police Department to transfer him to the Hospicio de San José and immediately report the facts in writing to the Director of Health.

If cases are reported after office hours, or if a medical inspector is absent from his station, they shall be immediately reported to Station J, Central Office, and the medical officer on duty there will, after examination, if he believes such person to be insane and that restraint is necessary, request the police department to send such insane person to the Hospicio de San José, and as soon as practicable thereafter, and invariably within a period of twenty-four hours, shall call in consultation a medical officer of the Bureau of Health, and they shall render the report provided for above.

REGULATION 10. In all cases where it is for the public welfare, or for

the welfare of any person who is insane, and when such person, or the person having charge of the patient, is opposed to his being taken to a hospital or other place for the insane, the medical inspector shall, in such cases, request another medical officer of the Bureau of Health to examine such person with him, and if they jointly believe such persons to be insane, they shall immediately report the facts to the Assistant Director of Health, who will request the prosecuting attorney of the city of Manila to prepare a petition to the Court of First Instance, praying the court to commit such person to the Hospicio de San Jose, if the person is a bona fide resident of the city of Manila, or to the San Lazaro Hospital, if he is a resident of the provinces. If the court having jurisdiction is not in session, any two medical inspectors of the Bureau of Health are hereby authorized to request the commitment of such person to a police station, provided that such case may be suitably cared for at such a station, until the facts can be brought to the attention of the court. If such person cannot be suitably taken care of in a police station, this fact should be immediately reported to the Director of Health.

EXPENSE OF DELIVERING INSANE AT A DESIGNATED HOSPITAL.

REGULATION 11. The cost of transportation insane persons to an institution and for their maintenance therein, is provided for by law, as follows:

1. By the guardian from the estate of the insane person.
2. By the person whose duty it is under Title IV, Book I of the Civil Code (to be named).
3. If the above are unable to pay the expenses wholly or in part, by the municipality in which the patient is a bona-fide resident at the time of his confinement.

GENERAL.

REGULATION 12. In no case is any employee of the Bureau of Health authorized to incur expense in transporting or maintaining insane persons except upon an order of the Director of Health.

REGULATION 13. Any person in charge of any institution or place in which insane, or alleged insane, persons are confined, and any district health officer or medical inspector, who has any doubt as to whether any person confined in such institution or place is insane, shall immediately notify the Director of Health of the facts in the case.

REGULATION 14. Medical inspectors and district health officers, in their respective districts, shall examine insane persons confined in institutions other than the San Lazaro Hospital in Manila, at least once each month, and submit a report to the Director of Health as to whether or not, in their opinion, any of such persons, so confined, may be safely released. If any person is recommended for release, information should be furnished as to whether such person is under sentence.

REGULATION 15. All employees or other persons having knowledge of any facts involving in any way the improper detention, care, treatment, or confinement of insane or alleged insane persons, shall report such facts immediately to the Director of Health.

REGULATION 16. The attention of medical officers of the Bureau of Health is especially directed to the fact that the accommodations for the care of insane in the Philippine Islands are limited, and that for the present, only such cases should be recommended for admission to an insane hospital as may be violent or a serious menace to others, and for whom, in order to be reasonably safe, restraint under skilled control is urgently necessary.

FOOD CONTAINERS FOR THE TROPICS AND PROPER PACKING OF FOOD SUPPLIES.

On regular dates a board of survey is convened to condemn spoiled food supplies and other imported articles at the Philippine custom-house.

Importers of the Philippine Islands have in vain protested to the manufacturers and exporters of the United States against careless packing, and, in many cases, have been driven to foreign markets because the preparation for shipping is done with more care there than in the United States. It would seem that the exporters of the United States prepare a consignment for shipment to the Philippine Islands in exactly the same manner as they would to Mexico or to any State in the Union where there is only a continuous railway journey involved. This has led to great loss, vexatious delays, and in many cases spoiled food products.

Manufacturers and exporters of cereal products and other food preparations intended for tropical countries should improve the containers in which such goods are packed, if the trade therein with tropical countries is desired. The American exporter at present sends to tropical countries the same packages as are prepared for home consumption. The wrappers or containers are found to be unfit to meet the conditions to which they are subjected in the hot and humid countries of the Tropics.

Cereals or other food preparations, when inclosed in paper containers, are soon infested with destructive insects, which cause them to be unfit for use. Merchants who have attempted to carry such goods, delivered to them in paper or cardboard packages, after a trial gave it up, as the losses greatly exceeded the profits and further orders were withheld. The purchaser would also find that before a package could be used at his home the insects would work through the paper or cardboard covering and destroy much of his purchase or render it of no value.

The container for such products should be of tin, glass, or other vermin- and moisture-proof material when intended for the tropical trade, especially in the countries subject to great humidity. It is believed that cereal food preparations would have a much larger sale in tropical countries, if they were put upon the market properly prepared to withstand the condition to which they are subjected.

The attention of the Government is called to this fact in order that it may receive administrative attention, inasmuch as it concerns the health of the people and the financial interests of the importers as well.

CAMPAIGN AGAINST MOSQUITOES.

A few years ago, Manila was probably one of the worst mosquito afflicted cities in the world, yet, within comparatively a few months, and with an expenditure that is not excessive, the city was practically rid of mosquitoes which are troublesome to man. The kinds that particularly gave trouble in the city were the *Culex fatigans* and the *Stegomyia persistans*. At the time the campaign was begun, it was recognized that in order permanently to free the city from mosquitoes, draining and other engineering work to the extent of an expense of several million dollars would have to be done, nor has there transpired anything since to alter this view. It has been demonstrated, however, that with a monthly expenditure of—

₱506.90 for employees in the mosquito brigade,	
1,044.59 for oil,	
177.05 carretelas,	
200.00 (estimated) overhead charges, inspection, etc.	
<hr/>	
1,928.54 total,	

it was possible to make the city reasonably free from mosquitoes.

In the work of mosquito extermination the Bureau has been greatly handicapped in not being able to secure the proper oil. Refined petroleum has been used, which evaporates quickly and does not cover sufficient surface. Through the courtesy of the Bureau of Public Works there were obtained a few gallons of oil which they have been using on road construction and it was found that this oil would cover twice the surface of water and last twice as long as the petroleum used by the Bureau of Health.

The great success which has been had in the Canal Zone by the use of larvacide has encouraged this Bureau to try it, and arrangements have now been made to manufacture it.

The formula is as follows:

Crude phenol containing 15 per cent phenols, specific gravity .965	gallons....	150
Rosin	pounds....	200
Caustic soda	do.....	30
Water	gallons....	6

This mixture is claimed to be an efficient disinfectant in dilutions of 1:500 and is an efficient larvacide in dilutions of 1:1,000.

During the early part of June, the sections of the city in which lowlands abound were literally infested by swarms of black night-flying salt-water mosquitoes (*Culex ludlowi*). This

was due to the extremely high June tides which formed salt-water marshes and filled up high pockets in the paddy fields with salt water, and, owing to the vegetable matter encountered therein, ideal conditions were present for propagation of this variety. It is of interest to note here that following upon this pest of *Culex* mosquitoes there occurred a widespread and severe epidemic of dengue fever and at the same time to invite attention to the fact that the *Culex fatigans* is practically absent.

The loud protests which were voiced against the reappearance of mosquitoes were excellent evidence of the success of the mosquito campaign which had heretofore been carried on. There was also some difficulty experienced because of the reappearance of the *Mysomyia rossii*, which were found in certain fish ponds, licenses for the maintaining of which had been granted by the city. These larvæ were being protected by the algæ that were growing along the borders of the ponds, thus preventing the tides from carrying the larvæ into the bay. The owners claimed that if the algæ were destroyed, there would be no food for their fish. It was only after considerable difficulty that mosquitoes were eradicated from these places.

From the experience had up to the present time in mosquito eradication in the city of Manila, it is apparent that if any further great improvement is to be brought about, it must be through engineering means, which would require an expenditure of some millions of pesos, and that it would be useless to spend very much more money on the methods that are being used at the present time. The present system is doing all that can be expected of it, and at times it has made Manila practically free from mosquitoes. But experience shows that if mosquitoes are to be entirely eliminated, and the reappearance of mosquitoes in swarms from time to time is to be avoided, the engineering work spoken of above must be carried out. With the hope of securing further assistance from the public in the work of mosquito eradication, the following circular was prepared:

DEPARTMENT OF THE INTERIOR,
BUREAU OF HEALTH FOR THE PHILIPPINE ISLANDS,
Manila, April 1, 1912.

CIRCULAR K-31.

THE EXTERMINATION OF MOSQUITOES.

Attention is called to the fact that for some time past the Bureau of Health has been making a very strenuous effort to rid the city of Manila of mosquitoes, and in many ways it has met with great success, but it is obvious that with the limited number of men at its disposal it is quite impossible to cover all places in the city of Manila as many times

as are actually necessary, and therefore your hearty coöperation in this work is requested.

Architects, contractors and builders.—It is pointed out that wherever there is any construction work going on there are necessarily excavations made in the ground for posts, fill, etc., which, through thoughtlessness or ignorance, are not filled in afterwards, and which therefore furnish receptacles for water and therefore mosquito breeding places. It is believed by the Bureau of Health that if the persons interested in the building would keep this fact in mind and by an occasional inspection would see to it that all holes not actually needed were filled in, much could be done to assist the Bureau of Health in the extermination of mosquitoes.

Another matter that should be given personal attention is that when drains in and around concrete buildings in process of construction are filled up with loose boards from the forms and these boards begin to decay there is provided food for mosquito larvæ and therefore these drains should be kept free of anything obstructing the flow or evaporation of water.

Also it is pointed out that when concrete vaults or tanks on buildings under construction become filled with rain water and contain small pieces of shavings they furnish breeding places for mosquitoes.

House owners and tenants.—In brief, it should be remembered that in order to eliminate mosquitoes among human beings it is only necessary to avoid collections of still water that remain for more than a few days and that this can usually be done by drainage or by oiling. Trenches, ditches, canals, and holes from which earth is removed and into which rubbish or garbage is placed serve also for breeding mosquitoes as soon as a rain partially fills them with water and sets up decay of the newly placed contents.

Ditches or canals leading from stables or kitchens which contain tin cans, grass, or other rubbish which impedes the flow serve as excellent breeding places for mosquitoes.

Rain barrels and pressure tanks ordinarily found under or on the roof, if not covered with fine wire netting or cloths, serve as excellent breeding places for the day mosquitoes, as do also eaves-troughs clogged by fallen leaves and other débris.

The water in natural ponds at the edges of which horse manure or similar refuse is dumped soon becomes sufficiently charged with decaying matter to afford a breeding place for myriads of mosquitoes, too numerous to be kept in check by natural enemies.

Small receptacles like petroleum cans, pails, vegetable or milk tins, if left around dwellings, collect enough rain water and small leaves and twigs to provide lodging and food for thousands of mosquito larvæ each week.

Undrained lots in which grass or other rubbish is thrown, either for filling or to dispose of it, furnish excellent breeding places for mosquitoes.

Natural or artificial ditches stopped up temporarily by sewer operations or other construction work frequently serve as breeding places for mosquitoes.

The residents of Manila are urgently requested to aid the Bureau of Health to exterminate mosquitoes, and they can be of great assistance by seeing that their house drains, rain barrels, vaults, etc., are properly screened and oiled; that they do not permit an accumulation of tin cans, old bottles, or other receptacles which can hold water; and that they

do not throw rubbish on lots, thereby assisting in the retention of the rain water; and, if it is impossible to give the matter personal attention, by communicating with the Bureau of Health and asking its assistance. A cupful of petroleum in the ordinary vault will prevent the breeding of mosquitoes, or 150 cubic centimeters of petroleum to every square meter of surface, renewed every week, will accomplish the result.

VICTOR G. HEISER, *Director of Health.*

SOME FLEAS OF THE PHILIPPINE ISLANDS.

With the exception of Doctor Herzog's paper on *Pulex philippinensis* in Bulletin No. 23 of the Bureau of Science, October, 1904, very little has been written on the fleas of the Philippine Islands.

The paper recently written by the Assistant Director of Health contains considerable data on the subject.

His conclusions are as follows:

That *Pulex philippinensis* Herzog and Schultze and *Xenopsylla cheopis* Rothschild are identical.

That *Xenopsylla cheopis* is the only rat flea found on the common species of rats in the Philippine Islands.

That only *Ctenocephalus felis* Bouche is found in the Philippines and that *Ctenocephalus canis* Bosc. is absent.

That *Ctenocephalus felis* Bouche in the Philippines differs from the same species in other parts of the world in that the third pair of bristles on the posterior border of the hind tibia is represented by a single bristle and a small hair or more frequently one or sometimes two hairs only.

That *Pulex irritans* Linnaeus is present and does not differ from the species in other parts of the world.

Table of Xenopsylla cheopis examined.

Hosts.	Male.	Female.	Total.	Place.	Date.
<i>Epimys norvegicus</i>					
<i>Epimys rattus</i>	187	259	446	Manila, P. I.	June 15, 1911, to July 31, 1911.
<i>Epimys cuerceti</i> and <i>Mus musculus</i>					
<i>Pachyura murina</i>	2	2	4	do	

These shrews were caught with rats in the same trap.

Table of Ctenocephalus felis examined.

Hosts.	Male.	Female.	Total.	Place.	Date.
<i>Homo sapiens</i>	9	24	33	Baguio, Benguet, P. I.	
<i>Homo sapiens</i>	2	1	3	Manila, P. I.	
<i>Epimys norvegicus</i>	1	2	3	do	
<i>Canis familiaris</i>	8	15	18	do	
<i>Felis domestica</i>	3	10	13	do	
Domestic rabbit	2	1	3	do	
Floor of house	3	5	8	do	

Table of *Pulex irritans* examined.

Hosts.	Male.	Female.	Total.	Place.	Date.
<i>Homo sapiens</i>	3	8	11	Baguio, Benguet, P. I.	May, 1911.
<i>Homo sapiens</i>	10	14	24	Manila, P. I.	July, 1912.

FOOD AND DRUGS ACT.

The enforcement of the Food and Drugs Act has continued with even more energy than in previous years, much attention having been paid to local products by the Board of Food and Drug Inspection.

This Board has proved of great assistance to the Director of Health in working out the details of problems for him and submitting recommendations, and as it is composed of representatives of the four Bureaus interested in the enforcement of the Food and Drugs Act, it is believed that the importers or dealers feel that a broader view is being taken of their protests than if they had to protest directly to the Director of Health, whose duty it is make the first ruling on a product.

During the year the question of improving the quality of the native brandy made from the fermented juice of the cocoa and nipa palm by pot stills, was taken up. The Board came to the conclusion that a brandy equal to any imported brandy could be manufactured if the methods suggested by the representative from the Bureau of Science, who is the chief of the department of organic chemistry, were carefully followed. A hearing was had before the distillers and liquor dealers interested, but as yet but little result has accrued.

In addition to this, the question of the use of saccharin in food products, the use of aniline dyes in distilled beverages and other food products such as bread and cake has been noted upon. The question of the manufacture of soda water has been investigated, as well as native sauces, macaroni, vermicelli, coffee, labeling of mineral water, and manufacture of *bagong*.

In addition to this many protests have been heard relative to the action taken by the Director of Health against the admission of articles offered for import. Chief among these protests have been those concerning tea, tinned milks, and cheese. Many consignments of tea are offered for import adulterated with the flowers of *Aglaia odorata* presumably to improve the flavor, while other consignments have consisted entirely of the stems of the tea plant instead of the leaf or leaf buds. The competition in the sale of tinned milks is great and new brands are continually being brought in designed to undersell other brands on the market, and not infrequently they are found to be deficient in

total solids or fats. Cheese is another product which has given more or less trouble, numerous brands being labeled "cheese" or "full cream cheese" when they are really deficient in fat and should be labeled "skim milk cheese."

Circular letters have been issued on the subject of the use of aniline coloring matters; on the use of any yellow coloring matter in bread or cake; on the use of saccharin in food products; relative to the proper labeling of certain products, and also a circular letter to importers and others interested stating that after December 1, 1912, the courtesy which has been extended to them to relabel in the custom-house their misbranded articles offered for import will be discontinued, except in the case of articles of food or drugs being offered for importation for the first time. The Food and Drugs Act has been in existence since 1907, and it is believed that this length of time has been sufficient for importers to notify their representatives abroad of the proper way of labeling their articles according to this Act.

A total of 471 articles offered for import has been passed upon during the fiscal year ended June 30, 1912.

Summary of food and drug inspections.

Articles.	Total.	Number of—	
		Adulterations and misbrandings.	Rejections.
Butter.....	5	0	0
Cheese.....	17	10	2
Coffee.....	2	0	0
Coloring matter.....	4	2	2
Fish, canned.....	38	3	1
Essences and extracts.....	28	6	6
Fruits, preserved.....	5	0	0
Fruit juice.....	8	1	0
Ginger ale.....	1	0	0
Glucose.....	19	8	8
Ham and bacon.....	3	0	0
Honey.....	2	0	0
Ice cream.....	2	2	2
Lard.....	1	0	0
Meats, canned.....	28	1	1
Medicines and drugs.....	27	2	2
Milks, canned.....	53	8	2
Mineral waters.....	3	0	0
Olive oil.....	1	0	0
Oleomargarine.....	3	0	0
Sauces and condiments.....	42	5	5
Sausages.....	5	0	0
Sirup and molasses.....	4	0	0
Tea.....	129	34	18
Vegetables, canned.....	12	0	0
Wines.....	1	0	0
Miscellaneous.....	28	0	0
Total.....	471	82	49

THE ARMY BOARD FOR THE STUDY OF TROPICAL DISEASES AS THEY EXIST IN THE PHILIPPINE ISLANDS.

The Army Board for the Study of Tropical Diseases as they exist in the Philippine Islands has made many valuable contri-

butions to medical science during the past year and the information which it has made available has been of considerable value in promoting the interests of the public health. Experiments on the effect of the ultra-violet ray of light on Manila's water supply have been conducted by the Board; extensive investigations have been made upon the etiology of beriberi, and an extract of rice polishings has been prepared which it is hoped will prove useful in the treatment of "taon" (infantile beriberi?); extensive studies made concerning the effect of the climate upon blonds and brunettes and many other matters of importance were considered.

During the year the Board changed membership and is now composed of Maj. Percy M. Ashburn, Capt. E. B. Vedder, and Lieut. E. R. Gentry. The Board has begun an extensive investigation with regard to sprue and every possible aid is being given it in carrying out researches regarding this disease.

MEAT SUPPLY.

The meat supply of Manila, during the past year, has not been very satisfactory. Owing to the desire to eradicate rinderpest from the Islands, importation of cattle from countries in which rinderpest prevails has been prohibited. In order to safeguard still further the Islands against the introduction of rinderpest arrangements were made for the slaughter of cattle imported from Australia and Indo-China at Sisiman, which is near the Mariveles quarantine station at the entrance of Manila Bay and some 30 miles from Manila. The restrictions placed upon the importation of cattle have caused a considerable advance in the price of meat and it is believed that the people generally are not consuming nearly as much as was formerly the case. With the exception of the foreign residents, the people of the Philippine Islands do not take kindly to the use of frozen or chilled meat, so that the demand could not be supplied by importations in this form. The rise in the price of meat was, no doubt, also responsible for the use of horse meat during the year. A number of horses are now being slaughtered at Caloocan and considerable vigilance is constantly required in order to prevent the use of meat from diseased animals. So far as this Bureau has been able to ascertain, from a strictly health standpoint there is no objection to the use of horse meat, provided, however, it is from sound animals. On account of the fact that a well-balanced diet is essential in maintaining good health, it is hoped that it will soon be possible for the Government to make arrangements whereby the cost of meat can be reduced, thus

making it again available for the many persons who are now unable to purchase it.

SEWER CONNECTIONS.

The sanitary betterment of the city of Manila has been seriously handicapped during the past year by the continuance in force of the injunction granted by the Court of First Instance which upholds the contention that Ordinance No. 125 is void in parts, and on account of which this Bureau is prohibited from compelling the connection of premises with the sanitary sewer. The case is now pending on appeal in the Supreme Court. Last year there were 1,058 sewer connections made, while this year there were only 950. If there had been no legal restrictions it is believed that at least 50 per cent more connections would have been made. When it is remembered that the total number of premises to be connected in the city of Manila is estimated to be 6,000 and that the new sanitary sewer has been ready for service since May 25, 1909, it is apparent that at this rate of progress a great many years must necessarily elapse before the many nuisances which now exist in the city of Manila can be permanently abated.

On account of the fact that facilities are now available in the city of Manila for making connections much more rapidly than heretofore, it is greatly to be regretted that so much time has to be consumed in overcoming the legal obstacles which have been strewn in the path of the Bureau of Health.

ARTESIAN WELLS.

It is satisfactory to report that there were more funds available during the past year for the installation of artesian wells than has been the case during previous years, and considerable progress has been made in providing new wells. The following is a brief list, by provinces, of those that were successful and unsuccessful:

Provinces.	Suc- cessful.	Unsuc- cessful.	Provinces.	Suc- cessful.	Unsuc- cessful.
Ambos Camarines.....	15	3	Nueva Ecija.....	9	
Occidental Negros.....	3	1	Nueva Vizcaya.....	4	1
Albay.....	1		Leyte.....	3	2
Cavite.....	1		Rizal.....	18	3
Tayabas.....	2		Laguna.....	8	
Iloilo.....	0	1	Pangasinan.....	4	3
Batangas.....	5		Samar.....	1	1
Cebu.....	3		Ilocos Sur.....	0	2
Cagayan.....	1	1	Tarlac.....	23	3
Bulacan.....	18				
Bataan.....	16		Total.....	143	21
Pampanga.....	10				

Owing to the unprecedented drought which prevailed in the Philippine Islands during so many months of the past year, in many instances the usual sources of water supply failed, and the artesian wells furnished water where, otherwise, great distress would have resulted, and, in consequence, many expressions of approval of the Government's course in installing artesian wells were heard.

SPECIAL INVESTIGATIONS IN THE BATANES ISLANDS.

Owing to their great isolation, and the fact that transportation to the Batanes Islands is available only a few times each year, these islands have not received the same amount of sanitary supervision as has been the case in other parts of the Philippines. This year, however, the Secretary of the Interior ordered Dr. D. G. Willetts, of the Bureau of Science, to make an investigation of the diseases that prevail among the inhabitants of the Batanes Islands, more especially with regard to a strange fever which was alleged to exist there. The stools of 400 persons were examined. Among these were found two cases of amoeba and one of balantidia; 66 per cent had *Ascaris lumbricoides*, and 26 per cent had hookworms, and the entire 400 were afflicted with at least one form of parasite.

The fever, on the Island of Itbayat, which is greatly feared by the natives, was investigated, and, from the symptoms he saw, Doctor Willetts was led to infer that the disease was malaria. Spleen examinations made of several hundred persons in the infected area showed marked enlargement in only one case. Numerous blood examinations failed to reveal any parasites. Later, however, Doctor Willetts contracted the fever himself, and as the symptoms were identical with those which had been described to him and since he found the æstivo-autumnal parasites in his own blood, it is reasonable to infer that the fever which prevails there is malarial in character.

The population of the islands is about 12,000 and there is not one physician among them. There is a practicante or undergraduate in medicine who renders considerable aid. A large supply of medicines was left with him and additional instructions how to use them were given.

LIGHTNING STROKE.

According to the United States census there is one death from lightning stroke for every 333,333 of the population, whereas, based on the figures for the Philippine Islands for the past five years, there is one death here among every 155,556 of the

population. In the Philippine Islands, thunderstorms are most frequent during the months of April, May, and June, and the number then gradually declines until January. During January and February electrical storms are exceedingly rare, although it is known that they have occurred. From the foregoing, it will be apparent that, in view of the fact that thunder storms occur in the United States during not more than six months of the year, and that they may occur in the Philippines throughout the entire year, the incidence of lightning stroke in the Philippine Islands is approximately the same as in the United States.

THE MANILA WATER SUPPLY.

It was most unfortunate that just at the time Manila was beginning to derive the maximum results, as measured in terms of a constantly decreasing death rate in the waterborne diseases, the new Montalban supply should become exhausted. The extraordinarily long drought experienced this year made it necessary once more to obtain the water for the city from the polluted Mariquina River. The Manila mortality rate gave every indication of reaching a much lower figure than had been reached at any time in the history of the city. It was, therefore, with considerable regret that the Bureau of Health viewed conditions which would interfere with the consummation of this most desirable result. The influence which the water supply of Manila has upon its death rate can best be seen by a brief review of the vital statistics since the new water supply became available. It may, perhaps, be remembered that the new water system has been in operation since 1908, which makes it practicable to compare the deaths, especially from intestinal diseases, with the number which occurred prior to the time when the new water was available. It will, perhaps, also be remembered that, previous to the use of the Montalban supply, the water for the city was obtained from the Mariquina River which gave drainage to a watershed upon which at least 10,000 persons lived, who considered it their inalienable right to pollute and defile the stream as they wished. The Montalban water supply comes from a practically uninhabited watershed some 30 miles distant from Manila. Up to the present time, no filtration system has been installed, and the water is the ordinary surface water found in the Tropics, contains amœbæ, and has a bacteriological count that, under favorable conditions, varies, approximately, from 150 to 300 bacteria per cubic centimeter. At the time that the new reservoir was constructed, it was the intention to provide a purifying

or filtration system. This has not been undertaken as yet, owing to the fact that there is not sufficient data available as to whether the amoebæ found are pathogenic or nonpathogenic. Experiments with filters has shown that all of them permit the passage of amoebæ, so that, if it should prove that the amoebæ are pathogenic, some system of purification will have to be used which will not permit of their passage. During the early part of the year, very favorable results have been obtained from experiments with the ultra-violet ray. In order to test this on a more extensive scale, a larger experimental plant has been ordered, and will be tried in the near future. It is interesting to observe, however, that in spite of the fact that the water has not been purified, there still resulted a marked diminution in the so-called water-borne diseases. For instance, for 1907, there were 344 deaths from dysentery; in 1911 there were 143. Of deaths from convulsions of children, which are generally admitted to be due to intestinal disturbances, there were, in 1907, 1,315, and, in 1911, 519. Of chronic diarrhœa and enteritis, under 2 years of age, there were 224 in 1907, and 120 in 1911. Among persons over 2 years of age, there were 553 deaths from diarrhœa and enteritis in 1907, and 151 in 1911. From the foregoing, it will be seen that there has been a reduction of almost one-half in the water-borne diseases.

The following were the death rates during the time the Mariquina water had again to be resorted to, and they are of special significance. The Mariquina water was used the first time from June 28, 1911, to July 27, 1911, and for the second time from March 9, 1912, to May 24, 1912. Based upon an average of the deaths for 1909, and 1910, the normal number of deaths for July, 1911, should have been 745; for August, 705; and for September, 656, or a total of 2,106. This year for July there were 830 deaths; for August, 878; and for September, 741, or a total of 2,449. This is 343 above the average rate.

Based upon an average of the deaths for 1909, 1910, and 1911, the normal number of deaths for March, 1912, should have been 611, for April, 564; and for May, 585, or a total of 1,760. This year, for March there were 732; for April, 671 and for May, 701, or a total of 2,104. This is 344 above the average rate.

Briefly then there have been 687 more deaths during the year than probably would have occurred had the Montalban supply been continuously available.

It is pointed out that, contrary to the experiences in the United

States, the highest death rate from the use of this polluted water was during the rainy season. This was probably due to the fact that the water receives most of its pollution from deposits of fecal matter being washed from the surface of the ground by

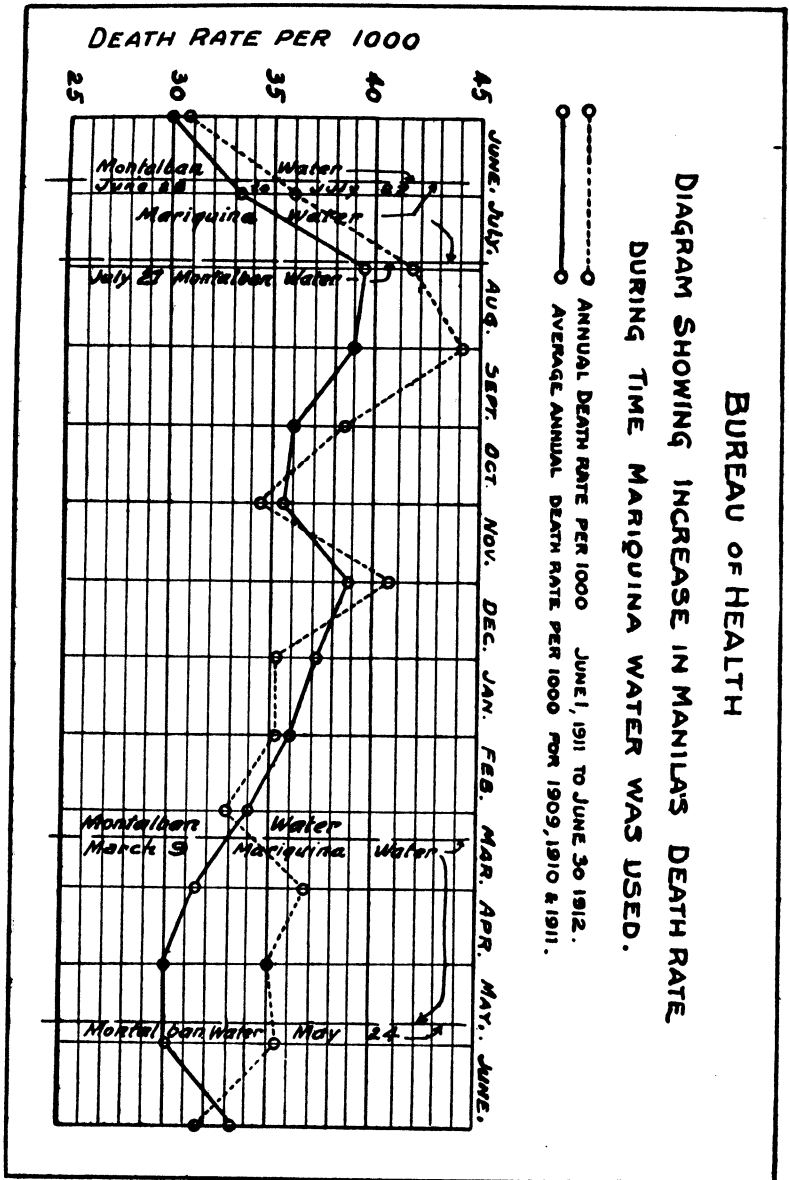


PLATE I.

the rains, whereas in the United States with proper sewage systems the same pollution is continually going into the water but rains so greatly dilute it that the contamination is proportionately less.

The accompanying chart shows in a graphic way the difference between the average rate and the rate that resulted this year during the time that the Mariquina water was used.

COLLECTION OF HUMAN WASTES IN THE PROVINCES.

The Bureau is still working to improve the system for the collection of human waste matter in the provinces. As has been pointed out before in these reports, in many places there is no system, feces being deposited on the ground and the pig acting as the scavenger. The closet to be found in the house is usually most objectionable and insanitary in the highest degree.

Taking everything into consideration, it is probable that a pail system for provincial towns is the most desirable, the contents of the pail to be properly buried at a sufficient distance from any superficial well. The expense of a municipal system for the collection of the pails, while not great, is usually more than the average municipality's finances will permit, and it is therefore usually left to the householder to dispose of the contents of his own pail when such a system is installed.

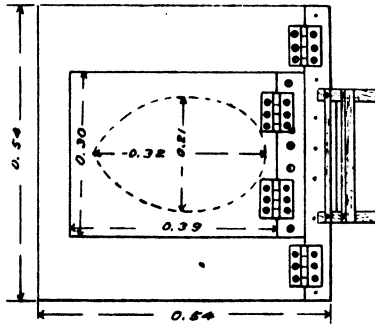
There has recently been designed in the Bureau of Health a closet of the pail type which is cheap, light and sanitary. The pail itself is a coal-oil tin with the top removed by the aid of heat to melt the solder. Around this is built a light open framework of wood, the top of which forms the seat, the hole being directly over the tin, and covered by a hinged lid. This seat and the top of the tin must touch so that there will be no crack through which flies may gain entrance while at the same time the tin may be removed from the side of the holder with ease. The whole thing, being open, may be kept clean; being light, it may be moved from place to place in the house if necessary; and when well made will prevent the ingress of flies and the egress of foul odors. It can be made cheaply and easily. The tin itself will last a month or more and is so cheap that it may be replaced whenever necessary. The contents of this tin should, of course, be properly disposed of. The accompanying cut shows the manner of its construction.

BUREAU OF HEALTH FOR THE PHILIPPINE ISLANDS
DIVISION OF SANITARY ENGINEERING

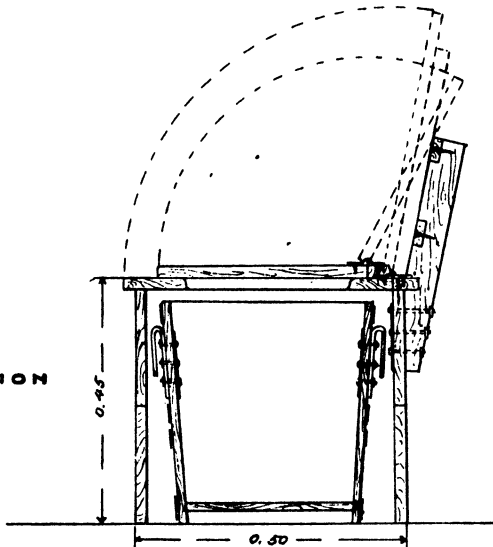
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JULY, 15, 1912
Geo. H. Guerdum
Sanitary Engineer.

TOP VIEW



SECTION



DESIGN FOR A NEW COMMODE
FOR THE
PAIL SYSTEM
CITY OF MANILA

THE EFFECT OF COPPER SULPHATE AND CALCIUM HYPOCHLORITE UPON THE MANILA WATER SUPPLY.

The accompanying chart (Plate No. III), shows in a graphic way the effect upon the number of bacteria during the time that copper sulphate and calcium hypochlorite, respectively, were used in the Manila water supply. Both chemicals were used in the proportion of 1 to 3,000,000.



PLATE III.

PHYSICAL EXAMINATIONS.

The medical examination required of applicants for the Philippine civil service, Philippine Training School for Nurses, and motor vehicle drivers is conducted by the Bureau of Health.

During the year, 774 persons were examined of whom 673 were passed, making 247 examinations more than for the year 1911. Twenty-three applicants were examined for the Philippine Training School for Nurses, with three rejections: One under age, two for tuberculosis. One hundred and seven applicants were examined for motor vehicle driver, with two rejections.

The following table shows the number of persons examined and the result of such examination, also cause for rejections:

Positions.	Passed.	Rejected.	Total.	Positions.	Passed.	Rejected.	Total.
First-class policeman (American)	30	0	30	Second-class Constabulary sergeant	1	0	1
First-class fireman (American)	88	0	88	Hospital attendant (American)	1	0	1
First-class prison guard	22	1	23	Cadet U. S. Army (Scouts)	5	0	5
Second-class prison guard	37	1	38	Promotion police sergeant	4	0	4
Second-class fireman	35	3	38	Foreman, construction	1	0	1
Third-class patrolman	60	3	63	Junior teacher	1	0	1
Third grade	20	3	23	Engineer's assistant	1	0	1
Third-grade apprentice	170	74	244	First-class bookkeeper	1	0	1
Messenger	1	0	1	Junior translator	2	0	2
Second grade	8	1	9	Stenographer	1	0	1
First-grade clerk	1	0	1	Third-grade watchman	1	0	1
Machinist	2	0	2	Clerk, certified appointment	65	5	70
Mate (American)	1	1	2	Checker, Bureau of Customs	2	0	2
Provincial police	11	1	12	Weigher, Bureau of Customs	2	0	2
Nurses, males	18	3	21	Motor driver	105	2	107
Nurses, females	2	0	2				
Junior surveyor	23	3	26				
Third-class custom guard	6	0	6	Total	673	101	774

Cause of rejection.

Poor vision (motor driver)	2
Under weight	36
Under height	21
Nurses (under age, 2 tuberculosis)	3
Tuberculosis and other pulmonary conditions	33
Organic heart disease	6
Total	101

SIMPLE REMEDY PACKAGES.

There has been a steady increase in the use of the "simple remedy" packages, mention of which, with a list of their contents, has been made in previous annual reports. Inspection trips have shown that these packages are being used with good effect in the most remote portions of the Islands, and are of particular service where medical aid is not available. The simple instructions contained in the pamphlet which accompanies

them have, no doubt, proved of great value in extending medical knowledge, and the medicines themselves have relieved incalculable pain and suffering.

DEATH RATE IN MANILA.

The excellent prospects for a lower death rate than prevailed in Manila during the preceding year failed of realization. In view of the fact that the increased death rate corresponded to the period during which accidents to the new Montalban water supply made the use of Mariquina water necessary, it is considered reasonable to infer that the increase was due to the poor quality of water which was furnished during that period. An analysis for the cause of this death rate will be found under the heading "Manila water supply."

The increase in the death rate over the figures for last year was 3.82 per thousand making the rate for the year 36.82. In this connection it is interesting to observe, however, that the death rate since the Montalban supply became available is still far below that which prevailed while Mariquina water was being used.

Another noteworthy point is the fact that the death rate among the Americans has been steadily increasing from 5.59 per thousand in 1907 to 16.53 per thousand for the year just closed. There are no data available to account for this steady increase in death among Americans.

There is also considerable evidence that the true death rate for the city of Manila is in reality lower than the figures show. It is becoming more and more known that many residents of the provinces upon finding themselves threatened with serious illness immediately come to Manila and claim this city as their permanent place of residence and are therefore included in the vital statistics for Manila, whereas in reality the deaths which occur among such persons should be charged to the provinces. Attention is also invited to the fact that in view of the very large increase which took place in the number of cedula, or head tax certificates, which were sold during the past year, there is reason to believe that the population of Manila is now considerably greater than the figures for 1910 show, upon the basis of which the death rates are calculated.

STREET CLEANING.

Street cleaning is performed by the department of sanitation and transportation. It does not come within the duties of this Bureau, but its influence on public sanitation is such as to bring it under the supervisory observation of the health authorities.

The condition of the streets of Manila would reflect credit on any city of equal size in any part of the world, notwithstanding that certain local conditions, such as the use of the carabao as a draft animal, make it difficult to preserve cleanliness.

THE FAJARDO ACT.

Another of the recommendations made in previous annual reports, for a better organization of the municipal health service in the provinces, had its partial realization in Act No. 2156, entitled "An Act authorizing the consolidation of municipalities into sanitary divisions and the reorganization of the municipal boards of health created by act numbered three hundred and eight; defining their powers and duties, and providing for each province a special fund to be known as 'health fund,' for this and other purposes."

This Act provided that provincial boards for the purpose of health administration may divide the provinces into sanitary divisions which may comprise one or more municipalities, and this shall be effected in a province whenever their organization has been agreed upon by at least two-thirds of the municipal councils concerned. A two-thirds vote of the councils also dissolves such divisions. The purpose of this Act is to provide skilled medical attention for the municipalities which have no physicians. The president of a health division is required by law to visit each municipality at least once a week, and to hold clinics not less than two hours a week in each municipal building of his division or in some other building, if more suitable.

This Act is a laudable one, but it remains to be seen whether its provisions can be carried out to the advantage of the public service. The duties prescribed for the president of the municipal health division are so numerous and so exacting, it is questionable if they can be performed under existing conditions in many of the divisions in which they are to be organized. The question of transportation, the inconsistency of a large division, which, of course, means a larger salary for the president with the proper performance of the duties, the local rivalry, and the ever-present question of provincial politics may tend to complicate the situation and produce failure.

The law imposes upon the president the duty of giving public lectures, as often as convenient, at least once a year, in each of the barrios or other convenient areas of his sanitary division. Since barrios are often far removed from the municipalities to which they belong, and frequently many in number, this part

of the work alone will be no inconsiderable task, and if done well, should be of very great importance.

REGULATIONS RELATIVE TO THE SALE OF DRUGS IN THE PHILIPPINE ISLANDS.

Incidental to the administration of the Food and Drug Act, the following regulations pertaining to medicines have been issued by the Bureau of Health:

1. A drug shall be deemed misbranded: First, if it be an imitation of or offered for sale under the name of another article. Second, if the contents of the package, as originally put up, shall have been removed, in whole or in part, and other contents shall have been placed in such package, or if the package fail to bear a statement on the label of the quantity or proportion of any alcohol, morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, or acetanilid, or any derivative or preparation or any such substances contained therein. (Act 1655, sec. 8.)

2. No preparation containing opium or any of its derivatives, can be dispensed except by a regularly licensed pharmacist on doctor's prescription. (Act 1761, sec. 5.)

3. Medicines containing morphine, opium, heroin, cocaine, alpha or beta eucaine, cannabis indica, chloral hydrate, acetanilid or any derivative, or the preparation of any such substances contained therein, arsenic, arsenical preparations, phosphorous, corrosive sublimate, cyanide of potassium, or other cyanide, atropine, strychnine, or any of their salts, and all other poisonous vegetable alkaloids or any of their salts, hydrocyanic acid, oil of bitter almonds containing hydrocyanic or prussic acid, oil of mirbane (nitro-benzene), aconite, belladonna, cantharides, colchicum, conium, cotton root, digitalis, ergot, hellebore, henbane, phytolacca, strophanthus, oil of tansy, veratrum viride, or their pharmaceutical preparations, carbolic acid, (phenol), creosote, croton oil, mineral acids, oxalic acid, paris green, salts of lead, salts of zinc, tartar emetic, and white hellebore, can be sold only in drug stores operated by a regularly licensed pharmacist. (Act 597, sec. 19 and 20.)

4. Medicines not containing any of the drugs mentioned in paragraph 3, may in a general way be considered household remedies (in the meaning of section 23, Act 597), and may be sold by grocers and merchants. Under the name of household remedies may be included quinine, epsom salts, castor oil, cough mixtures not containing opium or its derivatives, iron, sulphur, etc.

5. In order to determine whether a medicine may or may not be sold in grocery or other stores not operated by a regularly licensed pharmacist, a sample of the medicine in question is to be taken and submitted to the Bureau of Health for examination by the Bureau of Science, and upon the result of this examination will depend the decision as to what class this medicine belongs.

6. Registered physicians are allowed to put up their own prescriptions or dispense medicines for their patients. Such physicians must, however, label any poisonous drugs which they dispense. (Act 597, sec. 23.)

7. No peddling of drugs of any kind is permitted. Act 597, section 23, permits grocers or other merchants to sell certain remedies. According

to Webster's Dictionary, peddlers are neither grocers nor merchants, and, therefore, the peddling of medicines is not permitted.

8. The principal labels on drugs for domestic commerce shall have printed in English, with or without the foreign label of the country where the drug is produced or manufactured, all information required by law, namely; name of substance or product, the proportion and nature of the ingredients named in paragraph 1, name of manufacturer and place of manufacture and whether artificially colored. (Regulation 16, Act 1655.)

9. Pharmacopoeal preparations contained in stock shelf bottles, in drug stores operated by regularly licensed pharmacists, and which are replenished from time to time from the original containers, do not come within the meaning of paragraphs 1 and 8.

10. No false or misleading statement, design or device can appear on the label, nor in any descriptive matter. (Regulation 16, paragraph (d), Act 1655.)

11. The Director of Health reserves the right to add other drugs which he may deem habit forming or poisonous to the list of drugs which can only be sold by regularly licensed pharmacists.

12. District health officers will see that patent medicines or other drugs or mixtures of drugs, dispensed without physician's prescription, comply with these regulations.

LEGISLATION.

The following Acts and ordinances bear directly or indirectly upon the question of the public health and their numbers and titles are here given for the sake of giving them due publicity:

Act 2116.—This Act creates a committee to investigate causes of the excessive infant mortality in the Philippine Islands, to recommend measures which should be adopted to decrease such mortality, and appropriating the sum of ₱10,000 for carrying the Act into effect.

Act 2122.—This Act provides for the confinement of insane persons in Government hospitals, or other institutions for the insane, and for the appointment of boards of competent medical inquiry in cases of doubt. Provision is made for the immediate commitment of the insane by the Director of Health in cases of emergency until such a time as due hearing may be had in court. When in the opinion of a municipal president insane persons constitute a menace to the safety of others, or are in danger of committing serious injury to themselves, or when the conduct of suspected insane patients is such as to call for immediate restraint they shall provide for the proper custody of such persons, and report the facts immediately to the Director of Health.

Act 2147.—This Act appropriates ₱70,000 contributory to the support of charitable institutions as follows:

For the campaign for the extermination of tuberculosis by the Philippine Islands Anti-Tuberculosis Society, fifty thousand pesos; for the

protection of infants, through the institution "La Gota de Leche" twelve thousand pesos; for the Mary J. Johnston Hospital, eight thousand pesos. Total seventy thousand pesos: *Provided*, That no such appropriation shall be paid to any institution that makes any discrimination as to persons received or treated by the same on the ground of religious belief.

Act 2152.—This is an Act which indirectly affects the public health by providing for the appropriation of public waters, and for the determining of existing rights thereto; for the public registration of all water rights; for the creation and use of water power; for investigations for and the construction, maintenance, and operation of irrigation systems by the Government of the Philippine Islands; for the repayment of money expended therefor; for the construction, maintenance, and operation of irrigation systems by private persons, for the inspection and regulation of all works pertaining to the use of water.

Act 2156.—Authorizes the consolidation of municipalities into sanitary divisions, defines the powers and duties of such divisions, and provides for the collection through taxation of the special fund to be known as a *health fund*.

Act 2161.—An Act amending Act No. 1975 pertaining to the training school for nurses of the Philippine General Hospital by removing the restrictions as to the number of nurses of each sex that may be admitted during one year. The change made is in section 2, and is as follows:

The Director of Health, so far as is consistent with the interest of the public service, shall select from amongst those persons jointly recommended by district health officers and division superintendents of schools, or in default thereof by provincial boards, students for the aforesaid classes from provinces organized under the Provincial Government Act, and from the Provinces of Palawan, Mindoro, and Batanes, and the number of students shall not exceed one hundred in all of each sex: *Provided*, that in the admission of said students the highest average obtained in the examinations referred to in subsections (a) and (b) of the next preceding section, shall be taken into account.

Ordinance No. 153.—Section 247 relates to the numbering of buildings, specifying buildings to be numbered, plan of and method of placing numbers, and prescribes the penalty for taking down, altering, or defacing numbers.

Ordinance No. 157.—This ordinance appropriates sums of money for sanitary improvement fund; removing and rebuilding nipa houses; numbering houses; reconstruction of midden sheds; midden sheds on Mariquina reservation and in city of Manila; street work in sanitary barrios; Paco Market; extensions of water mains, sewers, and storm-water drains.

Ordinance No. 158.—Section 122, specifies the building mate-

rials that may be used in strong and light material districts, respectively. It also gives the boundaries of the fire wall district and cites the regulations and restrictions under which fire walls must be erected.

Ordinance No. 164.—This ordinance amends chapter twelve of the Revised Ordinances.

Section 180 designates the method of procedure in making application for plumbing repairs.

Section 191 relates to the installation of plumbing fixtures and connection with the sewer line.

Section 192 cites causes for condemnation of plumbing and gives the conditions under which the engineer may suspend work and reasons for withholding permits.

Section 195 relates to method of installing soil and drainage pipes and specifies materials to be used and method of construction.

Section 215 specifies locations where water-closets may not be placed.

Section 217 states kinds of water-closets that may be installed and method of installing and flushing. Floor materials to be used. Class of urinals to be installed and where.

Section 219, class of sinks, etc., prohibited.

Section 223 relates to inspection and tests of plumbing.

Section 224 concerns the issuing of certificates of approval for plumbing.

Ordinance No. 172.—Section 124 specifies the kinds of light building materials that may be used in light material districts, and cites certain restrictions for the use of these materials. It also specifies height of light material fences.

Ordinance No. 149.—This ordinance relates to public health and to the establishing of regulations to prevent the pollution of the water courses of the Mariquina reservation. It was passed under authority of Act 1150, and has regulations governing trespassing, pollutions of streams, garbage cans, public midden sheds, privy pits, location for disposal of garbage and night soil, bathing in water courses, corrals, drainage of stables, inspection, sanitary guards, police jurisdiction, and for certain prohibitions. It is also provided that infraction of the ordinance shall be tried before the municipal court of Manila, and that the present occupants of the estate known as the Pingay Estate may remain on it pending the decision of the Court of Land Registration on the claim of the said occupants.

Ordinance No. 169.—This ordinance amends section 229 of the Revised Ordinances, so as to read as follows:

SECTION 229. *Measurement and size of courts, and so forth.*—Courtyards and light wells shall be measured in the clear of all projections into them, with the exception of roof leaders, wallcoping, sills or fire escapes, not exceeding one and twenty one-hundredths meters in width. The minimum size of a court for a one-story building shall be six square meters; for a two-story building nine square meters; for a three-story building twelve square meters and for a four story building twenty square meters. No court, courtyard, or light well shall be less than two meters in width for a one or two-story building, nor less than three meters in width for a three or four-story building: *Provided*, that where the first story of a building is used for business purposes only, the upper story or stories, being for dwelling purposes, the space occupied by the first story may conform to the requirements prescribed for business buildings, except that no court or light well shall be less than that hereon prescribed, but the upper stories must conform to the requirements for buildings used for domestic purposes.

SEC. 229 (a). *Shops or stores with domestic quarters in connection.*—Buildings or parts of buildings intended for the dual purpose of shops or stores, with living quarters in connection, shall have suitable and separate living quarters for each tenant, proprietor, or established business. Such living quarters shall consist of suitable sleeping room or rooms, kitchen, toilet and bathroom, and such quarters shall pertain to and form a part of the apartment. Living quarters of two or less rooms shall be provided with not less than one water closet and bath for every three rooms, but common kitchens shall be prohibited.

SEC. 229. (b). *Kitchen and water-closet accommodations in tenements.*—In every tenement house hereafter erected, there shall be a separate kitchen, provided with running water, a paved floor, and a separate water-closet for and within each apartment.

The foregoing ordinance shows that Manila is building for the future, and that the central idea is ventilation and health.

PROVINCIAL REPORTS.

Heretofore the district health officers have been given the greatest latitude with regard to their reports of health conditions in the provinces. Consequently such reports varied greatly in substance and frequency, according to the ideas of the reporting officers.

In order to establish uniformity, and to obtain definite data with regard to health conditions, it became necessary to restrict their reports more to those conditions which affect the public health, so as to eliminate generalities.

The following circular was issued as a guide.

Hereafter until further notice district health officers when visiting any of the municipalities within their districts shall make a complete report

upon each municipality visited. The district health officer shall try to visit each municipality at least once every two months.

His report shall include a report on all jails and prisons, both provincial and municipal, giving a statement as to the sanitary conditions; water supply; overcrowding; diseases encountered and any other information which may be pertinent; in case any suspected tuberculosis is found samples of sputum shall be taken and forwarded for examination.

A report shall be made upon markets, their sanitary condition, location, whether the proper ordinances are enacted for the protection of food and the proper handling of the same.

A report shall be made giving a statement as to what amount has been appropriated by the municipality for sanitary purposes; whether or not disinfectants and pumps are on hand; whether the latter are in good condition, and whether both are available for immediate use; whether the municipality has on hand medicine for treating the indigent sick.

A report shall also be made upon the sanitary personnel of the municipalities, number of inspectors, salaries, and report as to their efficiency.

A report shall also be made upon cemeteries, whether or not they have been approved by the proper authority; whether maintained in a sanitary condition and whether any of them should be closed and new ones substituted.

A report shall also be made upon all Government buildings as to their sanitary condition.

A mortality report shall be made for the previous three months giving the most common cause of death, with normal mortality and number of inhabitants; prevailing diseases presence of malaria, dysentery, acute enteritis, tuberculosis, beriberi, yaws, cholera, smallpox, and leprosy.

A report shall be made as to the source of the water supply of the municipality. If artesian wells, how many.

A report shall also be made of any tobacco factories within the province, as to the sanitary arrangements, etc.

In short the report shall include a complete report on all sanitary matters connected with the municipality and shall be rendered as soon as possible after the inspections have been made.

District health officers shall also, wherever possible, make it a point to collect blood-sucking insects, as mosquitoes, biting flies, fleas, ticks, lice, and mites, etc., from human beings and animals, and transmit the same to the Bureau of Health.

BICYCLES AND SANITARY INSPECTORS.

The largest single item of expense which the Bureau of Health has to meet is that of transportation. The nature of the duties of its employees is such that, in order that they may be of the greatest service, rapid transportation is necessary to the point at which their services are required. After experimenting with automobiles, motor bicycles, carromatas and street cars, it has been demonstrated that ordinary bicycles are the cheapest and most satisfactory method of transportation in places like Manila, and it is now the definite policy of the

Bureau to require that sanitary inspectors shall own their own bicycles as a condition of employment, just as a carpenter is expected to furnish his hatchet, saw, and other tools, when employed.

THE HOUSE FLY.

That Manila can be kept comparatively free from flies is not a matter of theory but a practical fact. The daily collection of garbage; daily sweeping of the streets; and the removal of forms of manure daily from every portion of the city, and the cleanliness of public markets and similar places, have long since demonstrated what can be done in this connection. In the Philippines the life of the average house fly is approximately three weeks. In view of the foregoing, this Bureau has considered it useless to attempt campaigns for the killing of adult flies. Money that is spent in this direction could be used to very much better advantage in preventing the breeding of flies by millions, rather than in spending similar sums of money in purchasing dead flies by thousands. Those who are familiar with the city of Manila will most likely ask why it is that in recent years flies are so frequently seen in Manila. The answer to this question is simple: Manila still has many hundreds of acres of lowlands, and, on account of the great cost of filling material, the risk has frequently been taken of temporarily breeding a few flies in order to eliminate a greater nuisance permanently. Flies also have resulted frequently from the fertilizers used in making lawns which have done so much to beautify the city of late years. In other words, horse manure and street refuse is frequently used in filling in lowlands and fertilizing gardens. If this is done in accordance with the terms which are imposed, then the filling would be carefully sprinkled with kerosene and covered with at least 20 centimeters of clean earth and no flies would be likely to breed, but, unfortunately it often happens that the conditions of the permit are violated, and these violations do not come to the notice of the sanitary inspectors in time to prevent the breeding of flies. There is also an additional difficulty in that it is claimed by many horticulturists that street cleanings and refuse that are sprinkled with kerosene lose their fertilizing properties, so that it would seem, if we desire to have lawns and flowers, we must run the occasional risk of having flies with us at temporary intervals.

CREMATORIES.

Owing to objection because of religion, there has been no great demand in the city of Manila for cremations. Most of the requests come from Japanese and Americans, and it is rare to find cremation permitted by a Filipino family. This attitude probably accounts for the poor facilities for cremations which exist. At San Lazaro there are two crematories of the old design, neither of which is very satisfactory. It was proposed to request funds for the construction of a new crematory, but as the Municipal Board of the city of Manila contemplates building a modern crematory in the near future, there is no necessity at the present time, for a duplication of this work.

MORGUES.

There are three morgues in Manila—two belonging to the Civil Government and one belonging to the military authorities. The morgue for dangerous, communicable diseases is located at the San Lazaro Hospital. The city morgue for general diseases is operated in connection with the College of Medicine and Surgery of the University of the Philippines, the expenses being borne jointly by the college and the Bureau of Health. The custom, which was so common up to a few years ago, of burying the dead in secret places, and of throwing them into the river or bay, in order to prevent their being sent to the morgue is now rapidly disappearing, and instances of this kind are seldom encountered.

THE ANTIPOLO PILGRIMAGE.

A study of the world's sanitary history has taught the sanitarian that religious pilgrimages are intimately associated with the spread of dangerous, communicable diseases. The annual pilgrimage to Antipolo, at which as many as 10,000 persons are present each day, constitutes a grave sanitary menace, and for this reason it has been customary for the Bureau of Health to minimize the danger as much as possible with the means at its disposal. This year a district health officer and six sanitary inspectors were stationed there. One of the greatest dangers connected with the pilgrimage is the fact that it is customary, after visiting the virgin, to bathe in the river which flows by the town. The water for drinking and other domestic purposes is obtained from this river at a point below where the bathing takes place. In order to supply a better drinking water, an artesian well has been sunk. Unfortunately, the quality of the

water is not of the very best, and on account of a slightly disagreeable taste, it is almost completely eschewed by the people; who still continue to obtain their water supply from the river.

Another source of grave danger is the lack of proper facilities for the disposal of human excrement. The sanitary facilities of the town are not nearly sufficient to meet the demands of the great number of persons who go there. This always constitutes a great danger of spreading cholera, typhoid fever, and diseases of an intestinal origin. This year, smallpox made its appearance in Antipolo, but fortunately there was no great spread of the disease because all adults are vaccinated, and the cases occurred almost entirely among children under 3 years of age who have been born since the last systematic vaccination, and, therefore, were unprotected.

One of the unsatisfactory things in connection with doing sanitary work of this kind is that no funds are provided for the purpose. The municipality has not sufficient revenues with which to provide for the installation of a sewer system, or even a pail system, and sufficient help to keep the public markets in a cleanly condition, nor is there a sufficient force available to provide ordinary municipal cleanliness. It is believed, in order to remedy this condition of affairs, that municipalities should derive some sort of revenue from pilgrimages of this kind in order that there may be money available with which to meet the cost of sanitary maintenance.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

The necessity for careful supervision of the health and development of school children is no longer open to argument. The people themselves are demanding such supervision as the most vital function of the public school system, so that no school can any longer claim a place in modern educational progress which ignores or neglects the health conditions of its pupils. If all parents were sufficiently wise in health matters, it would probably be unnecessary for schools to make any special study of the physical condition of the children entrusted to their care. But it is a fact, and not a theory, that not all nor even most parents are wise in matters pertaining to the health condition of their children. It becomes, therefore, the plain duty of the school department to furnish not only a healthy school environment but also a careful guardianship of the personal health of its pupils.

Medical supervision includes far more than inspection. It

means a health study in a broad sense of the pupils in the schools, with an attempt to adjust them to their physical environment. It means a study of the condition of sight, hearing, and examination for evidence of nasal obstruction, diseased tonsils, seriously defective teeth, disorders of nutrition and development, unbalanced nervous organism, for signs of early heart or lung disease, for enlarged glands, skin diseases, and symptoms of children's common contagious diseases. It means the careful physical study of school children, for it has been shown clearly that there is an intimate relation between the child's physical condition and its mental progress and future success.

Because of the manifold duties imposed upon the Bureau of Health, including its numerous hospitals and dispensaries, the medical supervision of school children can go much further than a mere inspection as to the state of health. In fact, the Bureau uses every inducement to have the school children of indigent families, of which there are many, come to the dispensary to have their ailments cured, and 50 per cent of these children take advantage of this opportunity. In a short time the Bureau will have established a dental clinic at the Philippine General Hospital for the purpose of caring for the teeth of school children and others who are unable to pay a dentist.

REGULATIONS GOVERNING THE METHOD OF INSPECTION OF SCHOOL CHILDREN.

1. It shall be the duty of the school physician to examine every student or pupil pursuing a course of study in any of the schools of Manila as soon as practicable after the beginning of the school year and as many times thereafter as is consistent with thorough work.

2. School physicians shall keep a card (Form 155-A) for every person examined, on which shall be entered necessary data relative to name, address, etc.; physical condition of the pupil; disposition of the case; and results of treatment.

3. Immediately after the last day of the fiscal year the school physician shall prepare a report for the Director of Health showing the number of pupils examined, diseases encountered, number receiving treatment, results of treatment, general benefit derived, and other pertinent data.

4. There shall be made to the Director of Health as soon as practicable after a school has been examined a report on Form 155-B, giving the diseases found among the pupils in such school and other data called for by that report.

5. If a pupil is found suffering with a condition or a disease not requiring exclusion from school, Form 155-C shall be filled in and sent to the parents or guardian, stating the facts in the case and recommending treatment by the family physician, or at a free dispensary if they are unable to pay

a physician. This form shall be in triplicate, one to be sent to the parents, one to be sent to the principal of the school, and the other to be retained by the school physician.

6. If the patient wishes to be treated at a free dispensary, this form (155-C) shall be taken to the school physician-at the free dispensary, who shall give appropriate treatment and note on the back of the form the number of visits, nature of treatment, and the results, and file it with the station or dispensary records.

7. When the symptoms justify an investigation of the blood, sputum, stool or urine, specimens should be submitted to the Bureau of Science through the Bureau of Health for examination.

8. In examining pupils special attention should be paid to their mouths and instruction relative to the care of the teeth given. Pupils with defective teeth should be referred to the free dental clinic, Philippine General Hospital.

9. For the purpose of treating school children the school physician shall hold office hours from 2 to 4 p. m. every afternoon except Saturdays and Sundays at the different health stations alternately.

10. The municipal physician may, upon request, give the necessary treatment to a pupil of a school, and upon the termination of treatment shall fill out Form 155-C which accompanied the pupil, and forward it to the school physician.

11. If a pupil is found to be suffering from a communicable disease, Form 155-C shall be sent to the parents or guardian, stating the facts and also that the pupil will not be permitted to attend school until entirely cured. This form shall also be made in triplicate, one to be sent to the parents, one to be sent to the principal of the school and one to be retained by the school physician.

12. If a communicable disease requiring notification under chapter 78, sections 762 and 763, Revised Ordinances of Manila, is found, a report by telephone shall be made immediately to the proper health station, giving diagnosis, name and address, and the person suffering from such disease shall be excluded and shall not be allowed to return to school until permission is given by the school physician or other medical officer of the Bureau of Health. However, a certificate of the attending physician will be accepted if presented at a station of the Bureau of Health and there viséed. (Chap. 78, sec. 781, Revised Ordinance of Manila.) All pupils residing in the same house as the patient shall also be excluded from school. (Sec. 782, Revised Ordinances of Manila.)

13. Once a year it will be the duty of the school physician or other medical officer of the Bureau of Health to vaccinate all pupils attending school except such as show evidence of having had smallpox or of a successful vaccination the previous year.

14. It shall also be the duty of the school physician to report to the Bureau of Health all conditions of the school building needing attention from the standpoint of sanitation, such as lighting, ventilation, plumbing, overcrowding, desk facilities, water supply, drinking cups, etc.

15. An investigation of a school should include a careful observation of all caretakers of the school and of the teachers also when such investigations are made for the purpose of excluding dangerous communicable diseases.

SPECIAL REGULATIONS FOR COMMUNICABLE DISEASES.

16. All cases of smallpox or varioloid shall be reported immediately to their respective health stations and the patients excluded from school and taken to San Lazaro Hospital, and all pupils of the same schoolroom shall be vaccinated immediately unless they can show evidence of having had smallpox or of a successful vaccination within the last year. The inmates of the houses in which such pupils lived shall be vaccinated and the necessary disinfection of the school and residence made.

17. *Diphtheria*.—In the event of finding a pupil suffering from diphtheria, the health station shall be notified immediately and the patient be excluded from school and sent to San Lazaro Hospital for isolation and treatment. Swabbings must be taken from the throat of the classmates of the pupils, and if any bacillus carriers are found, they shall be also excluded from school and placed in San Lazaro Hospital. Pupils or teachers living in the same house as a diphtheria patient will not be permitted to attend school without a certificate from the school physician or other officer of the Bureau of Health.

18. *Varicella*.—Pupils suffering from varicella shall be excluded from school, and the medical inspector of the district notified.

19. *Measles*.—The health station shall be notified immediately of all cases of measles, the pupils excluded from school, disinfection of the schoolroom carried out, and all pupils and teachers living in the same house prohibited from attending school. It is pointed out that at its outset an epidemic of measles can frequently be checked by prompt isolation of the cases, closure of the schools, and observation of contacts.

20. *Mumps*.—In the event of a pupil suffering from mumps, the pupil shall be excluded from school and the health station immediately notified.

21. *Tuberculosis*.—A pupil suffering from active tuberculosis of the respiratory tract shall be excluded from school, the health station notified and the patient, if unable to employ a private physician, sent to a dispensary of the Antituberculosis Society or to some other free dispensary.

22. *To the principal of the school*.—Attention is called to the fact that the responsibility for detecting sickness among pupils does not rest entirely with the physician. It should be the duty of the principal of the school or of the school-teachers to observe each pupil, noting physical defects and skin eruptions; and if there is reason for believing that the child is not well, the school physician should be communicated with immediately. If there is reason to suspect that a pupil is suffering from a dangerous communicable disease, such pupil should be excluded from the school and the facts made known immediately to the health station for necessary action.

23. Emphasis is laid on the fact that backwardness in children is frequently due to physical defects, such as adenoids, enlarged tonsils, deafness, eye defects, etc., and the mental dullness displayed by certain children cannot always be blamed on inattention during class hours or neglect of study. It is therefore, highly important that the teachers observe whether there is not a possibility that such pupils may be ill or physically defective to such an extent as to account for the apparent lack of mental power.

The following blank forms are used to record the medical data in connection with the school inspections:

[Form No. 155-C in triplicate.]

Form No. 155-C.

DEPARTMENT OF THE INTERIOR.
DEPARTAMENTO DE LO INTERIOR.
BUREAU OF HEALTH.
KÁGAWARAN NG SANIDAD.

NOTIFICATION OF PHYSICAL CONDITION OF SCHOOL CHILDREN.
PATALASTAS NG KALAGAYAN NG KATAWAN NG MGA NAGSISIPAG-ARAL.

....., 191
 (School.—Páralán.) (Grade.—Grado.) (Date.—Kaarawán.)

To the PARENTS:

Sa mga magulang ó kamag-ának:

You are hereby notified that
 Sa pamamagitan nito'y ipinatatalastas sa inyó na si (Name.—Pangalan.)

address is suffering from
 naninirahan sa ay dumaranas ng sakit na (Name of condition.—Pangalan ng sakit, atbpa.)

And should receive treatment from the family physician or at a free dispensary if unable to pay a physician.

At kinakailangang ipagamót sa inyóng sariling manggagamot ó sa mga pagamutang walang bayad, sakaling walang ikababayad sa manggagamot.

A communicable infectious disease, and shall, therefore, not be permitted to attend school until entirely cured. Other children in the same house shall not be permitted to attend school until further notice.

Na matinding makahawa (enfermedad infecciosa), dahil dito'y di pahihintulutang makapasok sa páralán hangáng sa ganáp na paggaling ng sakit, at hindi rin pahihintulutang pumasok sa páralán ang kasambahay na nagaaral, hangáng sa muling pagpapatalastas.

A communicable disease, and shall, therefore, not be permitted to attend school until entirely cured. Treatment may be received at a free dispensary.

Na nakakahawa (enfermedad comunicable), dahil dito'y di pahihintulutang makapasok sa páralán hangáng sa paggaling ng sakit. Makapagpapagamót sa mga pagamutang walang bayad.

School Physician.
 Manggagamot Páralán.

Addresses of free dispensaries of Bureau of Health:

Kinaroroonan ng mga pagamutang walang bayad ng Kágawarán ng Sanidad:

Philippine General Hospital, Taft Avenue, Ermita, 8-12 a. m. and 2-4 p. m.

Meisic, Cuartel Meisic, Binondo.....

Tondo, 256 Moriones, Tondo.....

Sampaloc, 15 Plaza Santa Ana, Quiapo.....

Paco, 610 Paz, Paco.....

Intramuros, 69 Victoria, Intramuros.....

Office hours, 2 to 4 p. m.

Mula sa 2 ng hapon hangáng 4 ng hapon ang pagpapagamót.

There are other private free dispensaries in the city.

Mayron pang ibang pagamutang walang bayad dito sa Maynila.

If treatment required at a free dispensary, present this to the physician in charge.

Kung ang pagpapagamót ay kailangan sa pagamutang walang bayad, ipakita itó sa manggagamot na namamahala.

To be filled in by physician giving treatment at free dispensary and filed at station.

Date of treatment.	Nature of treatment.	Results.

Form No. 155 A.

School..... Grade

Name Address

Sex Nationality Age

Date of examination.	Diagnosis.	Excluded.	Bureau of Health notified.	Referred to dispensary or physician.	Received treatment.	No treatment.	Results.

.....
(To be initialed by school physician.)

Form No. 155B.

**DEPARTMENT OF THE INTERIOR.
BUREAU OF HEALTH.**

REPORT ON THE PHYSICAL DEFECTS IN SCHOOL CHILDREN.

Date, 191

School. Total number pupils examined

	Boys.	Girls.	Disposition of cases.					Total.
			Ex- cluded.	Sent to dispens- ary.	No. treat- ment.	Re- fused treat- ment.	Health station noti- fied.	
TO BE EXCLUDED.								
Pertussis.....								
Mumps.....								
Tuberculosis.....								
Measles.....								
Contagious eye cases, except trachoma.....								
Pediculosis with live pediculi								
Scabies.....								
Contagious skin cases.....								
Favus.....								
Other communicable infectious diseases.....								
Pediculosis, no live pediculi								
Adenoids.....								
Tonsils hypertrophied								
Conjunctivitis, acute								
Trachoma.....								
Myopia.....								
Other eye affections.....								
Defects of hearing.....								
Discharge from one ear								
Discharge from both ears								
Adenitis, tubercular								
Tinea.....								
Dental caries.....								
Bodily deformities.....								
Mental defects.....								
Backward development								
Other diseases.....								
Number of vaccinations required								
Number of vaccinations made								
Total.....								

Examination of this school finished, 191

.....
Medical Inspector of Schools.

SOUTHERN ISLANDS HOSPITAL.

The Southern Islands Hospital was completed and ready for use during the month of January, but, unfortunately, the Legislature failed to provide for any personnel or funds with which to open it. It is very much to be regretted that this institution, which would be capable of relieving so much pain and suffering, and might save many lives, remains unused. The need for medical and surgical relief became so acute, however, during the month of June, that Acting Governor-General Gilbert authorized this Bureau to negotiate with the Railroad Company for the use of its hospital. The capacity of this institution is very limited, but everything possible is being done to afford relief to those who require it, so far as the facilities will permit.

The new Southern Islands Hospital has a capacity of sixty beds, and, with a very small outlay, could easily accommodate one hundred, if occasion therefor should arise. It is even more modern than the Philippine General Hospital in Manila, and represents the experience of the Bureau in designing a practical hospital that will best meet the needs of the conditions in the Philippines. The hospital is octagonal in shape, and, it is believed, represents one of the first instances where the difficulty heretofore met with in this design has been overcome, namely: the avoidance of dark, interior rooms, and poor ventilation. It will also be noted that the capacity of the wards can be increased by extending them, or by adding another story. This gives eight different ways of increasing the capacity of the hospital, and, at the same time, the construction work could be carried out without unduly interfering with the operation of the hospital. The design also provides for the greatest possible number of units. For instance, in spite of its small capacity, there is provision for the treatment, in separate wards or private rooms, of medical, surgical, gynecological, obstetrical, tuberculous, and children's diseases, as well as by sex and by the class of diet. There are, also, living quarters for a resident physician, a chief nurse and an assistant, male pupil nurses and female pupil nurses; an out-patient dispensary, pharmacy, general office, operating room, obstetrical delivery room, two dining rooms, kitchen, and store room. The accompanying plates show the first and second floor plans of the hospital.

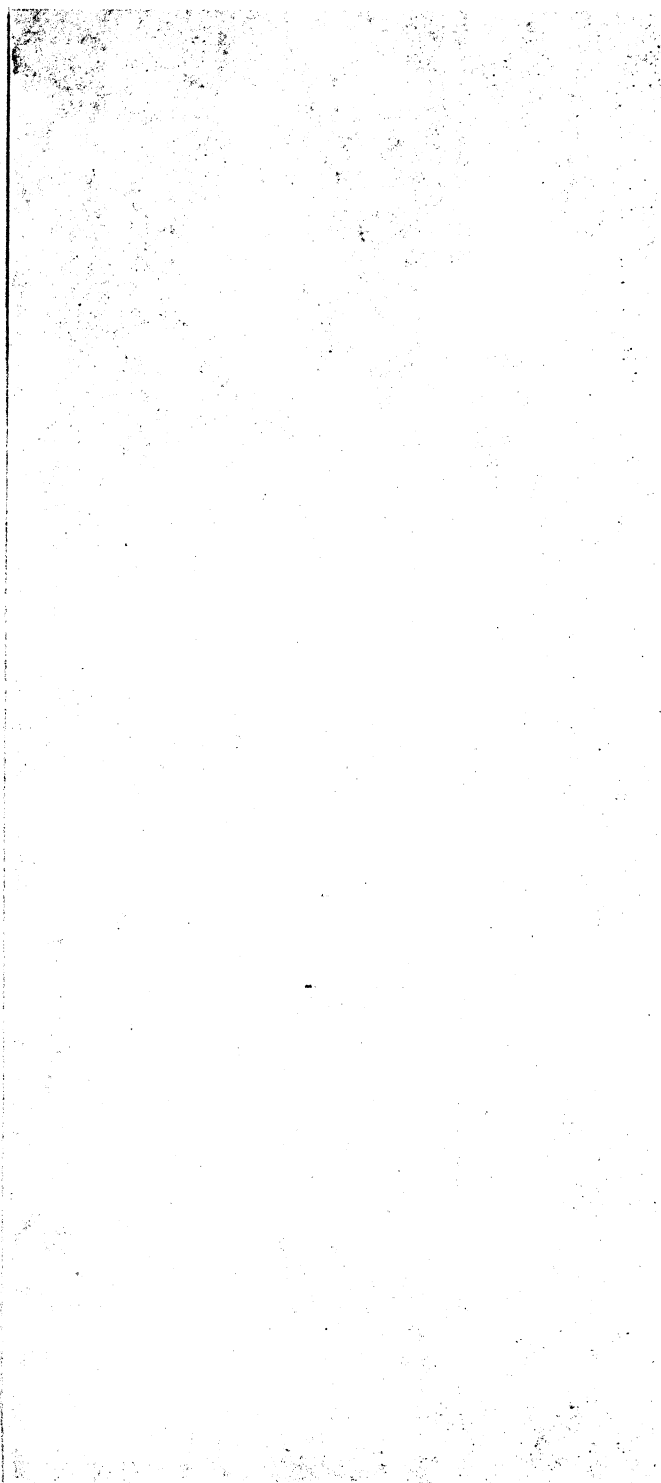
LOWLANDS.

The fact that Manila is built on a low tidal flat, and that many areas or islands of this flat have gradually been raised well above the high tide level by elevating the streets and building

SOUTHERN ISLANDS HOSPITAL

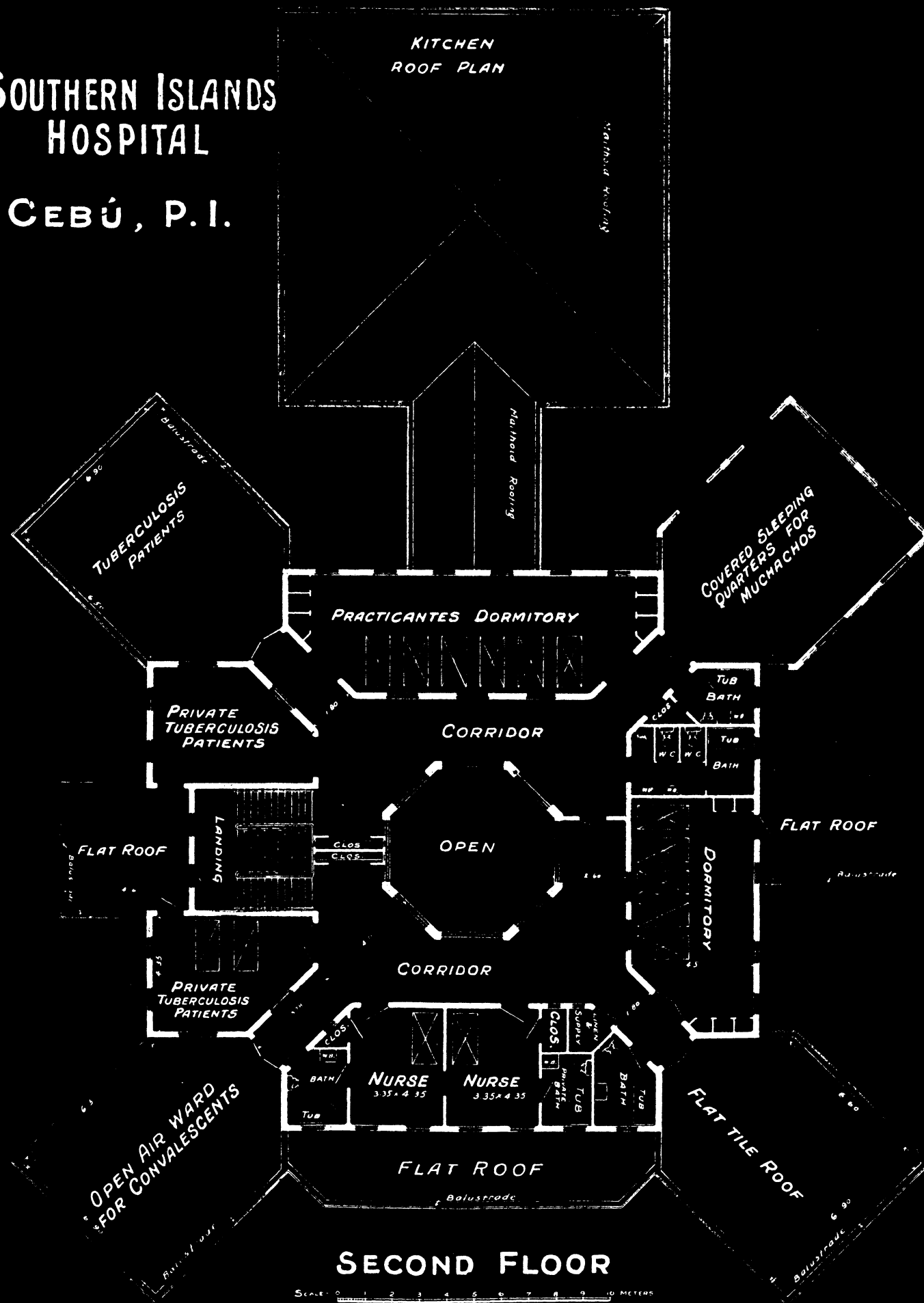
CEBÚ, P. I.





SOUTHERN ISLANDS HOSPITAL

CEBÚ, P. I.



sites, has to a large extent, resulted in Manila's having undrained pools and low water areas throughout the various sections of the city. The remedying of this condition all at once is beyond the financial resources of the city. As mentioned in another portion of this report, much has been done toward relieving this condition by utilizing street sweepings for filling purposes. Some years ago an ordinance was passed which required all buildings to be elevated to at least ten centimeters above the established grade of the sidewalk. The operation of this ordinance has gradually aided in lifting many sections of Manila above the high tide level. During the year considerable filling was done with the material that was dredged from the esteros and canals.

Since the sanitary barrio idea, which was inaugurated by the Government several years ago, was so successful, several private concerns have engaged in the business of filling in lowlands and building thereon model workingmen's houses. All these different lines of activity are factors in gradually eliminating the lowlands in Manila, but it is believed that even greater progress would be made if the Honolulu system were adopted. In Honolulu, this consists of a reimbursable fund of \$75,000. Wherever undesirable lowlands are encountered, an order to fill them is issued to the owner. If he fails to carry out the order within a reasonable period, the work is done by the Government and the cost of the same constitutes a lien against the property. Actual experience has shown that after the filling has been done the property is so desirable that the land is greatly enhanced in value, and the cost of making the fill is quickly restored to the Government. It is believed that a similar system would prove successful in Manila.

FREE DISPENSARIES.

The Bureau of Health maintains and operates a free dispensary at each of the five health stations in Manila; one at the San Lazaro Hospitals; one at the Philippine General Hospital, and it gives aid to the dispensary of the University Hospital, the Mary J. Johnston Hospital dispensary, the St. Paul's Hospital dispensary, and the San Juan de Dios Hospital dispensary, and to the dispensaries of the Anti-Tuberculosis Society, and, in addition, operates five dispensaries in the subprovinces of the Mountain Province, the Province of Agusan, the Batanes Islands and in Nueva Vizcaya. In addition, it also furnishes hundreds of boxes of well-assorted medicines and surgical dressings to be used by its own officers and employees, by missionaries, school-teachers, and other persons who can be depended upon to extend

gratuitous relief to the poor. This latter service has grown to tremendous proportions, and the Bureau of Health medicine boxes are now found in the most remote sections of the Islands. The medical and surgical relief which has been extended by these dispensaries has been of almost incalculable value. Dangerous, communicable diseases are often found among persons who apply for relief, and through their early detection it is often possible to stop an outbreak. The confidence of the people is gained by the relief from suffering which is afforded them, and the health officers and others who use the medicines soon come to be on such close terms with the people that they invoke the aid of the sanitary official and his measures as soon as any dangerous, communicable disease makes its appearance.

The free dispensary of the Philippine General Hospital, in size, ranks among the principal clinics of the world. It has a surgical, genito-urinary, gynecological, obstetrical, pediatric, neurological, dermatological, dental, psychopathic, general medical, and eye, ear, nose, and throat departments, and patients are being treated there at the rate of 80,000 a year.

NEW WATER SUPPLY FOR CEBU.

Another public improvement which it is confidently hoped will result in a largely decreased death rate, was the completion of the new waterworks at Cebu during the early part of 1912. The new water system was formally opened by the Governor-General on February 17, in the presence of a large audience made up of prominent citizens from various parts of the Islands. The Cebu water system provides for a supply obtained from an uninhabited watershed. A dam has been constructed to impound 333,000,000 gallons of this water. A system of distributing pipes, throughout Cebu, has been installed. It is now imperatively necessary, however, that a sewer system be provided for carrying off the wastes which will so rapidly increase as the result of a piped water supply.

PUBLIC WATER SUPPLIES.

The campaign for better water supplies in the Philippines, which has been so persistently waged since American occupation, and more especially since 1905, is beginning to show marked results. When Spain relinquished authority over the Philippines, with the exception of the water system of the city of Manila, there was practically no water supply installation in the entire Archipelago. Water was obtained, either from surface wells, or simply dipped from the rivers as they flowed past the various

towns. The question as to whether the water was really safe and potable seemed seldom to have been gone into from a scientific standpoint, nor was the enormous amount of labor to be saved, and the convenience which would result by having it delivered by pipes, ever considered. For a number of years after American occupation, the apathy of the Filipino people toward the question of better water seemed almost impossible to overcome. By a campaign of education, persistently carried on, Filipino officials were gradually interested in the project, and through them, the masses of the Filipino people, with the result that, at present, a good water for domestic purposes is one of the leading public questions of the day in the Islands, and is one of the planks that form the platform of almost all Filipino candidates for public office.

With a few exceptions, the boring of artesian wells may be said to have begun in 1906, when the first well was bored at Mexico, Pampanga. The first few wells met with considerable opposition, and considerable superstition developed in connection with using water from sources with which the masses were unfamiliar, but this gradually disappeared as the better quality of the water became manifest, so that, during the past year, the Bureau of Public Works installed 143 wells, and the entire number, since the work was begun, is 680. The provinces, municipalities, and private individuals have probably installed an equal number, and it can be seen that the introduction of this form of water supply is now reaching large proportions. A decreasing mortality curve has followed in the wake of the artesian well. Some towns, where artesian well water is exclusively used, have shown a 50 per cent reduction in the mortality. As experience was gained with artesian wells, it was found that the geological conformation of many sections of the Islands was not favorable for them, and, therefore, the plan of impounding water from uninhabited watersheds, and distributing it through reservoirs and pipes, had to be considered. The gratifying reduction in the mortality from water-borne diseases which has followed the introduction in Manila of water from an uninhabited watershed, has encouraged considerably the movement to introduce this form of water supply into the Philippines in places where artesian wells cannot be used. At the present time there are at least 50 towns in the Islands that are considering the installation of water systems by impounding surface waters. The Bureau of Health has been very reluctant to encourage the use of surface waters, even when they come from an uninhabited watershed, because the question whether the amœbæ

which are found in all surface waters in the Philippines that are not either thermal or strictly chemical, are pathogenic or nonpathogenic, has not been satisfactorily determined. It is encouraging to note, however, that as the studies in this matter proceed, it seems more and more possible that amœbæ may be roughly divided into two kinds: (1) The harmless variety which is found in all surface waters, and (2) the pathogenic variety, only found in water, or on vegetables and other substances that have come there directly or indirectly through the means of stools from cases of dysentery. Similar conclusions have been reached in Panama, and the use of surface water there, from uninhabited watersheds, has apparently, resulted successfully. At Cebu, a water supply of the kind was finished and opened for service on February 17, and if a reduction in the death rate from water-borne diseases results, the use of similar systems in other parts of the Islands would be fully justified.

The extraordinary development in connection with the installation of better water supplies in the Philippines, is an excellent concrete example of what may be accomplished, when officers of all classes work harmoniously together for the purpose of obtaining a result. In the case of water installations, everyone, from the Governor-General to the lowest official, took occasion, when opportunity afforded, to encourage the use of better water. The constantly decreasing death rate where it has been introduced, is an excellent monument to their efforts.

POISONOUS SNAKES.

The popular impression that there are no poisonous snakes in the Philippine Islands was not confirmed by the investigation which was made by District Health Officer A. Catanjal, who was detailed to make an investigation of this matter. The following is abstracted from his report:

During the fiscal year ended June 30, 1909, 86 persons are reported to have died in the Philippines as the result of snake bites. The deaths are distributed by provinces, as follows: Cagayan, 3; Isabela, 1; Ilocos Norte, 18; Ilocos Sur, 5; La Union, 2; Pangasinan, 16; Nueva Ecija, 6; Tarlac, 6; Laguna, 3; Batangas, 13; Albay, 9; Bohol, 2; Misamis, 1.

It will be noticed that the more thickly populated provinces report the greatest number of deaths. Possibly this is due to it being possible for municipal officers in these provinces to secure more accurate vital statistics than in the less populous ones. Based on the census of 1903 of the population of the above provinces, the rate of deaths due to snake bites is 3.14 per cent for each 100,000 inhabitants. The list of native names given in the report shows how difficult it is to secure accurate information from local sources regarding the kinds of poisonous snakes in the Islands. The same

species has a number of different names, and a description from which the species could be surely recognized was obtained in only a few instances. Nevertheless it is interesting to note that under different names, the cobras are recognized as responsible for the majority of deaths in these provinces.

Deaths by poisonous snakes.

Provinces.	Alumag-iu.	Alupung.	Camámalu.	Carasaen.	Jaguason.	Rimuranon.	Tadioco.	Ulupung.	Unknown.	Total.
Albay						9				9
Amboe Camarines						1				1
Batangas									13	13
Bohol									2	2
Cagayan	1								2	3
Ilocos Norte				8					10	18
Ilocos Sur									5	5
Isabela									1	1
Laguna									3	3
La Union				2						2
Misamis					1					1
Nueva Ecija								6		6
Pangasinan				5			4		7	16
Tarlac		1	2	2					1	6
Total	1	1	2	17	1	10	4	6	44	86

The alumag-iu cannot be recognized; alupung is evidently *Trimeresurus nagleri*, a crotalid snake; camámalu, carasaen, jaguason, tadioco, and ulupung are, without doubt, different names for the cobra. From the description of rimuranon it is difficult to decide whether the species is a cobra or *Hemibungarus calligaster*, a small snake very closely related to the deadly krait of India. It is interesting to note that not a single death is directly ascribed to the bite of the so-called rice-snake, palaspas, commonly called in the Tagalog provinces by the name of dahun palay. It is probable that, if full reports of the deaths caused by snake bites could be obtained in all provinces of the Philippines, the number of deaths known to be due to that cause annually would be very considerably increased. Most of the poisonous snakes cannot be surely distinguished by any readily seen external character.

The treatment of snake bites as given in various localities consists of ligatures near the wound, of suction applied by means of horns, cupping glasses, or so-called snake stones, of cauterization by hot iron or acids, of massage, sweating, and of the internal use of *Strychnus philippinensis*, *Ignatia amarra*, many species of Piper, and of *Aristolochia indica* and *Serpentaria*. Liquor is used in great amount, with the belief that if drunk to the point of intoxication, it will protect the person from the effects of the poison.

Recent studies of snake venoms and their physiological action have proved that the only procedure of any value in cases of snake bite is the following:

1. Immediate free incision of the wound.
2. Effective ligature of the bitten member central to the wound.
3. Cauterization, preferably by the rubbing in of potassium permanganate.

Liquors and cardiac stimulants should *never* be used.

BACILLARY DYSENTERY.

Outbreaks of bacillary dysentery have been reported in the Philippine Islands from time to time. Two years ago a severe outbreak occurred in the Province of Iloilo among the residents of Barotac, due to the river, from which the drinking water was obtained, becoming infected immediately above the town. Smaller outbreaks have occurred in Batangas and other parts of the Islands, and outbreaks have also been reported from Paracale and Goa in the Camarines and cases of bloody diarrhœa, with deaths, in other portions of the Islands, were probably due to bacillary dysentery. Investigation has also shown that the disease prevailed in some of the Igorot towns from which the labor supply for the new railroad was drawn, and that the disease was, in all probability introduced into Baguio from them. Soon after the Government Bureaus were transferred to Baguio, during the latter part of February, outbreaks of diarrhœa were reported. An investigation showed that approximately 10 per cent of the employees were affected. At first there was a disposition to attribute the diarrhœa to the altitude, and lower temperature which prevails at Baguio, but an investigation of the matter showed that the disease prevailed among the permanent residents to the same extent as among the new arrivals. The laboratory results, obtained later by the Bureau of Science, showed that bacillary dysentery was undoubtedly present. It is extremely likely that, with the veritable pest of flies which prevailed in Baguio, and the careless habits of domestic servants in not properly cleansing their hands, in association with the lax methods of disposing of human excreta, the conditions were very favorable for the spread of the disease. An appropriation of ₱10,000 was made for improving sanitary conditions. With this money three crematories are being built, and immediate steps taken to collect and burn all horse manure and other material likely to breed flies. Greater cleanliness among domestic servants was insisted upon. The daily collection of night-soil and garbage was instituted. Soon after these measures were put into effect, a rapid decline in the number of cases of dysentery took place.

It is estimated that among the employees of the Government Bureaus there were 65 cases, with 2 deaths of children. Among the general population, estimated at 1,000, there were probably 100 cases, of which 5 died.

BERIBERI.

During the fiscal year just closed there were 1,206 deaths from beriberi in Manila, which is 274 less than occurred during

the preceding fiscal year. While this improvement is gratifying, it is still greatly to be regretted that the public did not enjoy the same benefits that were derived in public institutions through the use of unpolished rice. In the latter places not one death from beriberi occurred where unpolished rice was continuously used. It is estimated that in public institutions there were formerly at least 600 deaths annually from beriberi. For the two years following the time that the use of unpolished rice was made compulsory there were practically no deaths from this disease and the beriberi only reappeared when the use of polished rice was again begun. Among the general population there are at least 5,000 deaths each year from beriberi throughout the Islands. There is also reason to believe that up to the present fiscal year, there has been a steady increase in the number of cases of this disease.

In 1907 there were reported, in Manila, 407 deaths from beriberi, whereas, in 1911, there were 1,480 deaths. Allowing a reasonable percentage for errors in diagnosis, and making allowances for the fact that there has been, probably, more attention given to beriberi on account of the amount of discussion which has taken place in the past few years upon the etiology of this disease, there still remain a large number of deaths which require explanation. The Filipino, as well as the Chinaman, Malay, and the people of Japan, are very fond of highly polished rice. In view of the gradual increase which has taken place in the wages of the Filipino laborer, it has been possible for him to purchase a higher priced variety (which, in other words, means a more highly polished rice) than was possible formerly, so that it appears not unreasonable to infer that the steady increase in the number of cases of beriberi has been directly due to the increased consumption of polished rice in the Philippine Islands. The increase in beriberi up to 1911 may perhaps, be further explained on the basis that during the past few years, owing to the failure of the crops in the Philippines, large quantities of rice have been imported, and this has been almost invariably of the polished variety. The reduction in the number of cases during the present year may perhaps be accounted for in part by the educational campaign to discourage the use of polished rice as a staple article of diet which has been so persistently carried out. Another factor is the change from rice to other food on account of the very high cost of rice which has prevailed. For instance there has been a considerable increase in bread consumption.

Further evidence that beriberi is associated with the consump-

tion of polished rice was afforded by the experience at the Culion leper colony. Owing to the great shortage in the rice market it became necessary, during November, to accept rice of the polished variety for use at the colony. During the four months immediately preceding January, 1912, the average number of deaths occurring among approximately 2,500 inmates of the colony was 28. During January the death rate commenced to increase, and by March it had reached 92 per month, or an increase of over 300 per cent above the expected normal number of deaths. As soon as an increase in the death rate was observed, during the latter part of February, large quantities of mongoes and other foods which were believed to contain the beriberi preventing principle were used with the white rice, and, about the middle of March, the use of undermilled rice, containing at least four-tenths of 1 per cent of phosphorus pentoxide was begun and has been continued to date. During the latter part of March a decrease in the number of deaths began to take place, and during April the total deaths for the colony had again fallen to 25 per month. During May the population was increased to 2,600 and the number of deaths was 29. From the foregoing, then, it is apparent that after polished rice was used during November, December, and January, there was a great increase in the number of deaths during February and March, and the number of deaths began rapidly to decrease when mongoes and unpolished rice were again used by the inmates of the colony.

In view of the fact that there was a disposition to regard the former executive order with regard to the use of unpolished rice as optional, and after a number of outbreaks of beriberi had occurred in surveying parties, prisons, and aboard Government vessels, the following executive order was issued and is now being enforced:

THE GOVERNMENT OF THE PHILIPPINE ISLANDS,
EXECUTIVE BUREAU.

BAGUIO, *April 26, 1912.*

EXECUTIVE ORDER {
No. 24.

Executive Order Numbered Thirty-seven, series of nineteen hundred and ten, is hereby amended to read as follows:

"In view of the fact that the Director of Health has reported to the undersigned that for some years past considerable evidence has become available that beriberi is associated with the continuous consumption of white (polished) rice as a staple article of diet, and that at the recent meeting of the Far Eastern Association of Tropical Medicine, which was held in Hongkong during January, nineteen hundred and twelve, this view has received further and more complete confirmation by investigators in Japan, China, French Indo-China, Siam, Netherlands India, the Straits

Settlements, and the Federated Malay States, and, in view of the further fact that the incidence of beriberi has been markedly reduced in Philippine Government institutions where unpolished rice has been used exclusively, the use of polished rice in all public institutions, or by any employee or person who is furnished rice by the Government, is hereby forbidden.

"All Insular, provincial, and municipal officials having control of public institutions, such as workshops, prisons, vessels, and so forth, and all employees and persons in charge of field parties, and so forth, to whom rice is furnished by the Government, are hereby directed to see that the provisions of this Executive Order are complied within the institutions and by employees under their control.

"Any rice which contains less than four-tenths of one per centum of phosphorus pentoxide shall be regarded as polished rice.

"Whenever it is impossible to obtain unpolished rice, polished rice may be used, provided that an equal amount of mongoes is used instead of rice on alternate days. In such case, the official responsible for issuing the rice must satisfy himself that the mongoes are actually used instead of rice.

"Whenever in exceptional cases it is impossible to obtain unpolished rice or mongoes, polished rice may be used. In such cases, provided that tiki tiki or an extract therefrom can be obtained, it shall be given with such rice under the directions of a physician. In any case where polished rice is used a report thereof shall be made immediately to the Director of Health, giving reasons therefor and the circumstances under which it was used."

NEWTON W. GILBERT,

Acting Governor-General.

CHOLERA.

During the latter part of the year there was a small outbreak of cholera in the Province of La Union. Sanitary measures were promptly applied through the district health officer and the outbreak came to an abrupt termination.

The most interesting observations which have been made in regard to cholera within the last year have been concerned with cholera carriers. In the month of July there was found dead in the district of Santa Cruz, Manila, a body with evidence pointing toward cholera as the cause of death. The body was sent to San Lazaro, a post-mortem was performed, and bacteriological investigations made, all of which proved the case to be one of cholera. Inasmuch as it was the first case to be discovered in the city and as there had been none in the city for some time, all contacts, of which there were seven, were taken to San Lazaro Hospital for observation and a bacteriological examination made of their stools, with the result that all seven were found to be harboring the cholera vibrio and therefore a menace to the public health. They were quarantined until the vibrios disappeared from their stools. Not one developed cholera. Whether these cases were infected from the actual case of cholera, or whether the case was infected from a cholera carrier cannot be proved, but it is unquestionably a fact that by

quarantining these seven cholera carriers, seven foci of infection were removed which might have been instrumental in starting an epidemic.

In January a case, presumably of cholera, with contacts, was taken from the same house to San Lazaro Hospital. This case did not die and all bacteriological investigation was negative.

Even more interesting from the standpoint of the health of the Philippine Islands is the fact that a routine examination made of the stools of immigrants detained at the Mariveles quarantine station has disclosed the presence of one cholera carrier from Canton, a Chinese. The Bureau has somewhat leaned to the theory that at least some outbreaks of cholera in the last ten years in the Islands have not necessarily come from carriers or infection from within, but have at times come from a carrier introduced from the outside, such as an immigrant from Canton or Japan where cholera was known to exist, and the finding of such a carrier in a Chinese immigrant from Canton who had not had the opportunity to become infected in the Philippine Islands proved the point almost conclusively and justifies the making of a routine bacteriological examination of all immigrants coming from cholera infected ports as a valuable quarantine measure.

THE DIARRHOEA OF BAGUIO. (Hill Diarrhoea)

The medical profession owes a large debt of gratitude to the members of the Army Board for the Study of Tropical Diseases, and to the Bureau of Science, for placing the etiology of the diarrhoea at Baguio, which has been so obscure heretofore, upon a scientific basis. In the past, many practitioners have been inclined to place the diarrhoeas of Baguio in the category of the so-called "hill diarrhoea," or "mountain diarrhoea," or, to acute intestinal disturbances due to sudden changes in climate. Other practitioners were of the opinion that the diarrhoea was due to the sudden chilling, owing to the low temperature, and to disturbances of blood pressure, owing to the altitude of Baguio, which is about 5,000 feet, and by failure to provide proper protection for the abdomen. All of these reasons were very unsatisfactory, and, from an epidemiological standpoint, were not susceptible to reason. For instance, when some 600 Government employees were transferred to Baguio during the latter part of February, 10 per cent of them were afflicted with diarrhoea soon after their arrival, but investigation showed that this disease prevailed to an even greater extent among the

permanent residents, so that the sudden change to lower temperature and higher altitude could scarcely account for the diarrhoea among the new arrivals. Owing to the very general use of distilled water, the water-transmission theory of the disease could also be excluded with reasonable certainty. A sanitary inspection made of Baguio showed that the town was being developed at the expense of sanitation, and that the advice of medical men, as contained in the sanitary ordinances of the town, was not being observed. The sanitation of the railway laborers' camps was defective. There was no proper disposal of the garbage of many of the houses. Horse manure was allowed to accumulate in heaps almost everywhere. The septic tank capacity was so small that instead of the water remaining in them for at least thirty-six hours, which is deemed necessary for a reasonable amount of biological action, some of it flowed through in less than four hours. As another source of infection it was shown that many of the servants had been washing dishes in the overflow from septic tanks. A careful examination made of the stools of the sick showed that they were suffering from bacillary dysentery. With the veritable myriad of flies which were bred as the result of the conditions outlined above, the opportunities that were present for the transmission of the disease by the hands, through the septic tanks, and other insanitary conditions, will at once be apparent. As soon as these were corrected, the bacillary dysentery decreased in direct proportion as the insanitary conditions were removed. In conclusion, then, it may be said that the diarrhoea at Baguio was not a strange, mysterious unknown disease, but one that was plainly due to the insanitary conditions which had been created.

DIPHTHERIA IN MANILA.

According to the reports of the Bureau of Health, diphtheria is increasing in Manila. A few cases were also reported from the provinces during the first half year covered by this report.

Cases are reported as follows:

Fiscal years.	Cases.	Deaths.	Fiscal years.	Cases.	Deaths.
1900	1	1	1907	15	13
1901	0	0	1908	18	9
1902	4	4	1909	7	0
1903	2	2	1910	23	10
1904	4	4	1911	25	* 16
1905	7	7	1912	49	17
1906	8	8			

* Including group, 1.

It will be seen that there is almost a steady increase in the number of cases and deaths reported.

In addition to this, there have been 24 diphtheria bacillus carriers. As the Bureau of Health looks upon these carriers as much more dangerous in the spread of infection than a frank case of diphtheria would be, all carriers are isolated in the San Lazaro Hospital and kept there until the bacilli disappear as shown by two successive negative findings. Diphtheria cases are kept in San Lazaro Hospital until not only the clinical symptoms have disappeared but until the bacilli have entirely disappeared as well, as shown by two successive negative cultures.

The longest time that the bacilli have remained in the throat of any diphtheria patient in the San Lazaro Hospital has been twenty-eight days from the time of disappearance of clinical symptoms. The longest time that any carrier has harbored the bacilli after being admitted into the hospital was eighteen days.

All cases of diphtheria are treated with antitoxin. Notwithstanding this, the mortality is too high, due to the fact that so many of these cases from the indigent, ignorant people are only seen by the doctor in the very last stages of the disease.

In order to combat this disease the following instructions were issued in guidance of the medical officers of the Bureau of Health:

1. If the condition is suspicious of being diphtheria, swabbings shall be taken immediately from the throat and sent to the Bureau of Science for examination. If the bacteriological report is positive, the case shall immediately be sent to San Lazaro.

2. Swabbings shall be taken from the throats of all contacts of positive diphtheria cases and sent to the Bureau of Science for examination. If the report upon any contact comes back positive, that contact shall be sent to San Lazaro for isolation.

3. Any contact desirous of receiving a prophylactic dose of antitoxin may be sent to San Lazaro, where the treatment will be given.

4. Persons are to be sent to San Lazaro only when they have diphtheria; when the bacilli have been found in the throats of apparently healthy persons (bacillus carriers), or when they desire to take a prophylactic dose of antitoxin.

5. In every case in which diphtheria is discovered in a child, the school history of such child shall be carefully investigated, and, if necessary, cultures taken from the throats of the pupils who have been in the same room with the patient, or other close contacts.

6. Inmates of houses in which a case of diphtheria has been found, even though they are not proven to be bacillus carriers, shall be inspected from time to time until the period of incubation has terminated, or for seven days from the time the house was disinfected.

7. Hereafter, swabs for making cultures will be obtained from the Bureau of Health. Each swab will be furnished in a sealed, sterile test-tube, without any culture-media. After swabbing the throat the swab must be

immediately placed in the sterile test-tube, the cotton plug inserted, and without delay sent to the Bureau of Science where the necessary culture will be made.

In the event that tubes with culture-media are used, care must be taken thoroughly to spread the material on the swab over the surface of the media. Do not break the surface of the media in any way. Do not allow the swab to touch anything but the throat of the patient and the surface of the culture media. The swab must be thoroughly sterilized before it is discarded.

8. Attention is called to the fact that domestic animals, especially the cat, have been found to harbor diphtheria bacilli in their throats, and, therefore, special investigation along this line is suggested.

9. Cases of diphtheria or bacillus carriers shall be held in San Lazaro until two negative bacteriological findings, on separate days, are reported from the Bureau of Science.

10. Immediately after the removal of a case of diphtheria or a bacillus carrier the room or rooms in which the person has lived shall be disinfected, together with all articles liable to have been contaminated by the secretions from the patient's throat or nose.

11. For every case of diphtheria, and for each bacillus carrier, a blank Bureau of Health form shall be filled out with the information required thereon, and as soon as practicable it shall be transmitted to the Chief, San Lazaro Hospitals division, who will fill in his part and send it to the Bureau of Health. This form shall be in addition to the transfer slip which is now required for each case of dangerous communicable disease.

GANGOSA.

The few cases which were encountered during the year, which had symptoms similar to those ascribed to gangosa, a disease reported, in former years, from Guam proved in each case to be a manifestation of syphilis. This further confirmed the view expressed in previous annual reports of this Bureau that this disease had not been found in the Philippines.

GOITER.

During the year information was received that there were many cases of goiter at Peñaranda, Nueva Ecija. Investigation of this matter showed that there were 43 cases. The population of Peñaranda is 8,410. The youngest case encountered was 16 years of age, in a male, and there were only four other cases under 30 years of age. The oldest recorded case was 51 years. At the time of the closing of the report an investigation of the disease is being made which includes an examination of the water supply of the town.

HOOKWORM.

Nothing transpired, during the year, which would tend to show that this disease is as serious here as it has proven to be in Porto Rico and elsewhere. In view of this fact, and, on account of the

limited personnel available, the energies of the Bureau have been largely diverted from hookworm to other spheres in which more certain results in improving the health can be obtained. Doctor Willets, of the Bureau of Science, did, however, examine about 400 persons in the Batanes Islands, and found that 26 per cent of them had hookworm, but he did not trace any very definite clinical effects to the presence of the disease.

INSANITY.

For the last fiscal year, there were reported 3,748 insane persons in the Philippine Islands, whereas, for this fiscal year, only 3,543 are reported. An analysis of the figures shows that there has been an almost uniform reduction in the number of cases throughout the provinces. An examination of the figures for the past seven years shows that the average number of insane persons in the Philippines remains remarkably uniform.

LEPROSY.

Probably one of the most satisfactory things to record for the year in connection with leprosy is the rapidly changing attitude with regard to isolation that is taking place among persons who are afflicted with this disease. This has resulted in many cases coming under observation during the past year that are in the incipient stage of the disease. The system for collecting lepers is apparently proving effective and to encounter cases in the advanced stage of the disease is becoming more and more rare. The total number of lepers at the Culion leper colony at the close of the year was 2,615, at the close of the last fiscal year it was 2,873. During the year 855 lepers were taken to Culion and 531 died. The uncorrected mortality was 218 per thousand.

More and more evidence is becoming available to show that leprosy has many of the characteristics of a house disease. It now frequently happens that new cases of leprosy are found in houses or families from which cases were taken several years ago. Statistics have been collected along these lines and will shortly be made the subject of a special paper which will be published in one of the medical journals.

The total number of lepers collected since the work was begun in 1906 is 6,695; of these over 3,000 were collected from the Island of Cebu. When it is remembered that the population of this island, as given by the last census was, in round numbers, 700,000, and that the total population of the Philippine Islands was approximately 7,000,000, it will be apparent that, while Cebu has only one-tenth of the population of the Philippine Islands, yet it has furnished about one-half of the number of

victims of this disease. It is believed that, if sufficient funds and men were available, much information with regard to the etiology of the disease might be gained by the study of leprosy among the people of Cebu. It is also interesting to observe that the percentage of new cases which occur in Cebu bears about the same relation to the disease in other parts of the Philippines as the original number of lepers bore to those in other parts of the Philippines. In other words the incidence of the disease remains much greater than in any other province.

It may also be of interest to observe that the nose still continues to be the site where leper bacilli can be detected with the greatest frequency and certainty. It may also not be out of place to mention here that other observers have reported that they have had no success in finding leper bacilli in nasal secretions and that specimens from above the eyebrow and other places yielded more certain results. In this connection it is pointed out that this Bureau has never made any statement with regard to the frequency with which leper bacilli can be encountered in nasal secretions. The method used is to make an actual scraping or scarification of the septum of the nose near the junction of the cartilaginous and membranous portion, and to have the resulting serum slightly mixed with the blood drawn from the scarification. In the experience had in making over 6,000 microscopical examinations this method more frequently yields leper bacilli than material taken from other portions of the surface of the body.

Analysis of the ages of 2,556 lepers confined at Culion leper colony shows most interesting results. The youngest cases on hand are three lepers 3 years of age. Then the number gradually increases to the age of 17, at which age there are 63; the number of cases between the seventeenth and eighteenth year almost doubles itself, the number of lepers 18 years of age being 106. The largest number, 139, occurs at 21 years of age, and after the twenty-fourth year, at which age there are 102 lepers, the number gradually declines until the one hundred-first year at which there is one leper. Briefly then, in the seven years which intervene between 17 and 25 years, there are 775 lepers, or almost one-third of the total number. From these figures it is evident that the preponderance in the numbers of cases occurs during early manhood and early womanhood. As to the sexes, the proportions that were recorded during the early years among lepers in the Philippines, still holds remarkably true. Of the total number 1,629 are male and 927 are females, so that approximately one-third of the lepers are women and two-thirds men.

TREATMENT.

More and more evidence is constantly coming to light that persons afflicted with leprosy who can take chaulmoogra oil continually over long periods of time, that is, at least six months, are greatly benefited thereby and in some instances apparently cured.

Their willingness or ability to continue taking the oil after the symptoms disappear is at least one important factor in the attempt to make the cure permanent. Unfortunately very few persons are able to take the oil by the mouth on account of the nausea which it produces. In order to overcome this objection, inunctions, enemas, hypodermoclysis, coated capsules which only dissolve after reaching the intestine, and other methods have all been tried, without great success. At one time during the year a specially prepared oil used by the hypodermic method offered some hope. This method is now undergoing investigation but at the time of closing this report it had not proceeded sufficiently far to warrant making a statement.

What is urgently needed is a research fund of at least ₱100,000 in order to make a special study of the treatment of leprosy. The results which this Bureau has already obtained are very encouraging and the work should be continued along scientific lines.

It is a noteworthy fact that, after the admission of patients, the great majority, without any special treatment other than good food, well ventilated sleeping quarters, and other hygienic requisites, improve very much. In mild cases the outward manifestations of the disease often disappear, and it is only by microscopical means that the disease can be proved to exist.

MALARIAL FEVER.

Certain sections of the Philippines, as, for instance, parts of Mindoro, Palawan, and Guimaras, continue to be centers for a pernicious type of malarial fever. Malaria prevails very generally, however, throughout the Philippines, as may be seen by the deaths recorded in the statistical tables. There are, on the other hand, many places where the disease does not occur. For a number of years now, it has been impossible to trace any cases to Manila or Cebu. Under the head of "Quinine and Malaria," in another portion of this report, there is discussed the effect of the million doses of quinine which were gratuitously distributed with the hope of reducing the ravages of this disease. The total number of deaths reported from malaria in twenty-nine of the provinces of the Philippines, was 24,339. At best, how-

ever, these statistics are very unreliable, deaths being frequently attributed to malarial fever which were due to other causes, and vice versa, no doubt many deaths occurred which were not charged to malarial fever.

What may be done in connection with combating this disease is, perhaps, best shown by the experience had at the Iwahig penal colony. Only a few years ago, from a malarial standpoint, this was one of the most dangerous places in the Philippine Islands. With a very moderate outlay, such antimalarial measures as draining, filling, oiling, the use of mosquito nets, and quinine used prophylactically, were carried out, and now the mortality will compare favorably with the most salubrious places in the Philippines.

The very extensive outbreak of malarial fever which has occurred among the employees of the companies engaged in the production of sugar on the San Jose Estate and vicinity, in Mindoro, has given this Bureau grave concern, especially as there has been a marked disinclination on the part of some of those who are responsible to carry out even simple sanitary measures. This condition not only threatens the success of the sugar project because it will become increasingly difficult to fill the places of those who fall by disease, but, in addition, those who have contracted the fever are found in increasing number in Manila hospitals, and what is more serious, such laborers are infecting sections of the provinces which have heretofore remained free from malaria.

During the coming year active steps will be taken, in so far as municipal, provincial and Insular appropriations will permit, to obliterate malarial mosquito breeding places, to distribute large quantities of quinine, and to carry on an extensive campaign of education with regard to antimalarial measures. Experiments are being conducted in the town of Mariveles in order to ascertain definitely what measures are necessary, and the cost thereof, for ridding a small Philippine town of malarial fever. In the vicinity of Camp Stotsenberg, in Pampanga Province, Army medical officers are rendering considerable aid to the local officials in combating malarial fever which exists among the inhabitants of the vicinity. The statistics from these two places will probably afford data which will be useful in extending malarial work in the future.

MEASLES.

The measles outbreak which began in Manila during the middle of 1911, was, in all probability, introduced by passengers on trans-

ports from the United States, and continued to spread until May, reaching as far north as the Batanes, and as far south as Siquijor. During the first quarter of this year the number of cases grew so large that the capacity of the San Lazaro Hospitals was no longer sufficient to provide for the isolation of the cases, and this had then necessarily to be done in the homes of the sick persons. The character of the disease was much more severe than the measles ordinarily encountered in the Philippine Islands, and this adds additional confirmation to the view that a fresh strain of the measles was imported. The type of measles ordinarily encountered in the Philippine Islands corresponds very closely to that which prevails in the United States, the exception being that all the symptoms are very much milder, and the coryza and catarrhal symptoms so very mild as frequently to be unobserved. So far as known, there is, also, practically no mortality from the disease. Among the measles that have prevailed during the year, of 534 cases, 23 died, which shows the disease to be of a more severe type than ordinarily prevails here.

PELLAGRA.

Since the suspicious cases reported in the Province of Isabela by Doctor Willets, a few years ago, no further cases of pellagra have come to the notice of the Bureau. Cebu is the province in which the cultivation of corn is most extensively carried on, and it forms, throughout the entire year, the staple article of diet of many of the poorer class. District Health Officer Pond, of Cebu, has, during the past three years, been diligently searching for cases that resemble pellagra, but so far, without success.

PLAGUE.

After an absence of six years in human beings and five years among rats, plague was again found in the Philippine Islands, on June 19. A Filipino employed as a watchman at No. 235 Calle San Jacinto, in the Chinese district, who resided at No. 920 Calle Antonio Rivera, was found dead at his home, on the date mentioned above after an illness of about three days. On post-mortem examination, typical plague buboes were found in the right groin and axilla. Smears made from the spleen showed Gram negative, bi-polar staining organisms, and inoculations made into guinea pigs resulted in typical attacks of plague. The organism which was recovered from the guinea pigs agglutinated plague serum in high dilutions. The source of the infection is unknown. The nearest known focus of plague is at Hongkong, and there is no evidence to show that this man had been out of

the country during the past few years. Test examinations of rats caught in the different districts of Manila, particularly those from importers' warehouses, have been made at weekly intervals throughout the year since 1907 and have always proven negative.

Houses in the vicinity of which the man resided, and where he worked, showed evidences of rat infestation, but an examination made of many hundreds of rats that were caught there failed to reveal any plague infection, nor was there any history of unusual rat mortality having occurred anywhere in Manila.

The second death occurred on June 26, in the person of a Filipino woman, aged 44 years, at 1615 Calle Azcarraga, near the Arranque Market. She was found alive, in her house, and had been ill for three days. At the time she was transferred to the San Lazaro Plague Hospital, she had a temperature of 41° C. and was in a dying condition. The autopsy showed slightly enlarged glands of the left groin, but the other usual autopsy findings of plague were conspicuous by their absence. Smear preparations made from the glands of the groin and from sections of the spleen, showed Gram negative, bi-polar staining bacilli. Inoculations made into guinea pigs produced typical attacks of plague, and the recovered organisms agglutinated with plague serum. This woman, from reliable evidence, had also not been out of the Philippine Islands during the past few years. At a near-by food store where the woman is known to have purchased her food supply, four dead rats were found. These were taken to the Bureau of Science for diagnosis, but the post-mortem and inoculation experiments have proven negative.

The mortality rate for the city is rather below the normal, from which fact it may be inferred that no unrecognized cases are occurring. Three rat-catching gangs have been put to work with the object of catching as many rats as possible in the vicinities of which the patients died, and from other sections which are considered suspicious. So far, all of the rats found have proven negative. From the foregoing, it is evident that there are no reliable data with regard to the origin of the disease.

From our present knowledge it would seem most likely that the disease must have been introduced by infected fleas, although, in view of the recent cases reported by McCoy in Hawaii, and by observers in India, food infection should not be completely disregarded. If the disease was introduced by infected fleas, it would seem most likely that they reached here on sick rats which came in cargo, like crates of onions, potatoes, baskets of eggs, garlic, soy, or similar foodstuffs which arrive almost daily, in large quantities, from China, Japan, and other plague-

infected countries. Rats have actually been observed in such cargo, and it would not be at all impossible for an infected rat to have been introduced in this way. The officers of the Public Health and Marine-Hospital Service, located in Hongkong and in Manila, have long since recognized the danger of introducing plague in this way, but up to the present time it has been impossible to devise a practical method for entirely eliminating the danger from the introduction of rats in this manner without placing prohibitive restrictions upon commerce. The theory of the introduction of the plague by means of food is slightly supported by the fact that, at the autopsy of the first case, ulcerated tonsils were found, but as no cultures were taken, it is impossible to submit anything definite under this head.

RABIES.

One case of human rabies has occurred in Manila during the year. In this case the disease had a period of incubation of forty days, with pronounced symptoms of rabies followed by death, and absence of lesions to account for death at the post-mortem. Negri bodies were demonstrated, proving the case to be rabies from the bacteriological standpoint.

One other case of human rabies was reported from the Province of Pampanga but no laboratory investigations were made.

A number of requests for treatments have been received during the year and furnished from the Pasteur laboratory of the Bureau of Science. These treatments are sent, with full instructions, to the presidents of the municipal boards of health, who usually administer the inoculations.

One of these cases receiving treatment in the Province of Ambos Camarines died of rabies shortly after it was finished.

SMALLPOX AND VARIOLOID.

The effect of the very extensive vaccination which has been carried out steadily since the establishment of a health service in the Philippine Islands is becoming more and more apparent; for instance, in the city of Manila there have been no deaths from smallpox since 1909. When this is contrasted with the thousands of deaths that took place annually prior to vaccination, it will be seen that this affords concrete proof of the boon that Jenner's discovery has conferred upon mankind. There were in Manila during the year 393 males and 207 females who contracted varioloid. Among these not one death occurred. It is also interesting to observe that no American and no Chinaman

contracted varioloid. The immunity enjoyed by the Chinese is no doubt due to the fact that the United States quarantine laws and regulations provide for their vaccination upon entrance into the Philippine Islands, so that there is an opportunity to carry out vaccination very thoroughly among them.

In some provinces, notably in Cebu, Oriental and Occidental Negros, and others there were some deaths from smallpox. Upon investigation, however, it was found that these almost invariably occurred among children who had been born since the last systematic vaccination of the province in which they resided had taken place. In other words, the local officials who are supposed to vaccinate during January and July of each year those children who are born in the interim and such other persons as may come into the province without being vaccinated, failed to carry out their duties. An analysis of the figures shows that the cases practically all took place among young children who had not been vaccinated.

During the year it was necessary to aid the following provinces and districts by furnishing Insular vaccinators: Iloilo, Agusan, Oriental and Occidental Negros, Surigao, Cagayan, Leyte, Masbate, Rizal, Busuanga, Bataan, and the Mountain Province.

SPRUE.

A number of cases of sprue are continually found, but, so far, no facts have become available which throw any additional light upon the etiology of this disease. The Army Board for the Study of Tropical Diseases as they Exist in the Philippine Islands is now undertaking an extensive investigation with regard to this disease, and it is hoped that in the next annual report more definite information can be submitted.

TAON (Infantile Beriberi?).

During the year, Maj. W. P. Chamberlain, the chairman of the Board for the Study of Tropical Diseases as they Exist in the Philippine Islands, and Capt. E. B. Vedder, a member of the Board, made most important researches into the therapeutic effects which could be obtained by administering an extract made from rice polishings, to infants who suffered from "taon" (infantile beriberi?). Doctor Vedder reported that he had treated 15 cases of this disease among infants, with no deaths. The diagnosis of infantile beriberi, in each case, was concurred in by at least three independent physicians, so that diagnostic error

was eliminated as much as possible. In view of the fact that the death rate among cases of this kind in the past has always been in the neighborhood of 50 per cent, the results reported by Doctor Vedder are remarkable, and offer some hope that, perhaps, at last, a remedy has been discovered with which the high infant mortality can be successfully combated. With this end in view, this Bureau has had large quantities of the rice-polishings extract made, and is now having the same tested by the physicians connected with the different health stations, by having them treat with the extract such cases as come under their observation.

TUBERCULOSIS.

The systematic campaign against tuberculosis in the Philippine Islands is now largely in the hands of the Philippine Antituberculosis Society. Appropriations, instead of being made to this Bureau for this purpose, are now made directly to the society. This Bureau does, however, extend every possible aid within its power to assist in the suppression of tuberculosis.

The Antituberculosis Society has been energetic in its campaign against tuberculosis and continued to furnish treatment and advice from its dispensaries situated in different parts of the city and at the San Juan Tuberculosis Sanitarium, which is being administered by it.

The Bureau of Health has set aside two wards in the San Lazaro Hospital for advanced cases of indigent tuberculosis patients, and still maintains its tuberculosis camp in connection with the hospital at Baguio. From this place many encouraging results have been obtained, showing Baguio to have an excellent climate for tubercular patients.

The question of tuberculosis among Government employees has been given serious consideration. Among other things, it was determined that the best time to make the physical examination of applicants for positions was at the time they were actually offered a place in the Government service, and not at the time they take the civil-service examination.

The period which sometimes elapses between the examination and the date of actual appointment is sufficient for an applicant to become infected with tuberculosis although at the time of the examination he may have been in a healthy condition.

TYPHOID FEVER.

In order to ascertain more accurately the number of deaths that occur annually in the Philippine Islands from typhoid fever, a letter was addressed to persons in charge of the following hospitals, and the number of cases, with the Widal reaction, is reported herewith:

General return of typhoid fever in the Philippine Islands during the year 1911.

Hospitals.	Cases.		Deaths.		Widal.			Blood.		
	Male.	Female.	Male.	Female.	Positive.	Negative.	0.	Positive.	Negative.	0.
University Hospital	7	4	1	2	1					
Hospital de San Juan de Dios	4	1	1	1	5					
Military Hospital, Mindanao	0	0								
Dapitan	0	0								
Headquarters, Isabela, Basilan	0	0								
Butuan Hospital	0	0								
Baguio Hospital	0	1								
Hospital Español de Santiago	0	0								
Warwick Barracks, Cebu		2		0	2					
Division Hospital, Manila	4				3	1		1	8	
Camp Connel, Samar	0	0								
Camp Ward Cheney, Cavite	0	0								
Topographical Survey Detachment, Tanay	0	0								
U. S. Army transport Liscum, Manila	0	0								
Camp Downes, Leyte	0	0								
Fort William McKinley	1		0							
Puerto Princessa, Palawan	0	0								
Camp Overton, Mindanao	0	0								
Camp Keithley	0	0								
Fort Wint, Grande Island, among civilians	0	0								
Augur Barracks, Jolo	0	0								
Torrey Barracks	0	0								
Camp Wallace	0	0								
Fort Mills, Corregidor	6	1			6	1		8	8	1
Camp Wilhelm, Tayabas	2				1					
Regan Barracks, Albay	0	0								
Cotabato, Military Hospital		1			1					
Fort S. Pedro, Iloilo military hospital	0	0								
U. S. Army transport Seward	0	0								
Camp Bumpus	0	0								
Headquarters Philippine Division	0	0								
Camp Joesman, Guimaras	0	0								
Dispensary, Fort Santiago, Manila	0	0								
Camp McGrath, Batangas	1				1			1		
Garrison infirmary, Cuartel de España civilian	0	0								
Military Hospital, Camp Treadwell	0	0								
Camp Stotsenburg	0	0								
Camp Eldridge	0	0								
Mission Hospital, Iloilo	5	2			1	2	000			
Siasi, Siasi	0	0								
Tucuen, Mindanao	0	0								
Military Hospital, Davao, Mindanao	0	0								
Camp John Hay, Benguet, among civilians	0	0								
Philippine General Hospital	22	7	8	2	9	5	15	0	0	29

To obtain further information among the practitioners throughout the provinces, an invitation was extended to them to forward specimens of blood from any continued fever case

which lasted more than ten days. Responses were received as follows:

Dates.	Names.	Towns and provinces.	Widal.	Remarks.
Feb. 23	Arturo Gonzales	Baliuag, Bulacan	Negative	
Feb. 23	Victor Acosta	Umingan, Pangasinan	Negative	
Feb. 23	Joaquin Vitug	Lubao, Pampanga	Negative	
Mar. 4	Feliciano Arias	Orion, Bataan	Positive	
Mar. 14	Mr. Taylor	Bontoc, Mountain	Negative	
Mar. 15	Andres Jayme	Cavite, Cavite	Negative	
Mar. 19	Maria Concepcion	Balanga, Bataan	Negative	
Mar. 27		Lucena Tayabas	Negative	
April 3		Mariveles, Bataan	Negative	
April 12		San Fernando, Pampanga	Negative	
April 12	Africa de la Rosa	Lubao, Pampanga	Positive	Agglutination test.
April 23	Vicente Llamzon	Orion, Bataan	(?)	Do. Specimen dissolved in physiol. Salt solution gave no agglutination with culture of bacterium typhosus.
April 26	Gregorio Catubig	Naic, Cavite	Negative	Agglutination test.
May 18	Sister Maria Raphael	Bontoc, Mountain	Negative	Do.
May 27	Ruman Paxas	Macabebe, Pampanga	Negative	
May 31		Guagua Pampanga	Positive	Agglutination test positive in dilution about 1:10; in higher dilutions, negative.
June 3	Several specimens, probably 3.	Santa Inez, Rizal	Negative	Agglutination test.
June 24	Gerardo Villareal	Iriga, Ambos Camarines	Negative	
June 24	Timotea Villareal	do	Negative	
June 24	Amparo Mendez	do	Negative	
June 24	Pedro Mendez	do	Negative	
June 27	Eusebia de Castro	Santa Rita, Pampanga	Negative	Specimen poor.

Out of 23 cases reported, only 3 proved to be positive for the Widal reaction. From the foregoing it is evident that typhoid fever does prevail, yet it can scarcely be said to be epidemic. For instance, at the Philippine General Hospital, which is an institution for the treatment of acute cases and has 350 beds, there were only 39 cases admitted during the year, of which 10 died.

It is believed, however, to be of the greatest importance to invoke measures which will prevent the further spread of this disease and reduce the number of cases already occurring. To this end, instructions are being sent out to provincial and municipal health officers that, in any case of continued fever, the necessary precautions should be taken to prevent infection of the hands and to disinfect all bedding which comes in contact with the patients, as well as stools and urine.

TYPHUS FEVER.

A few cases suspicious of typhus fever have been reported from the Philippine General Hospital by Doctors Musgrave and Sison, but, up to the present time, these cases have not been confirmed.

None of the cases reported proved fatal but nearly all of them

were characterized by a period of delirium of a maniacal character.

In view of the present theories with regard to the etiology of this disease, it is of interest to note that *Pediculi vestimenti* are unknown in the Philippines. Head lice and bedbugs are very common, and *Pediculi pubis* are also present, but comparatively rare, so that, if the suspicious cases reported are true cases of typhus fever, it would seem likely that there is an intermediary other than the body louse. The disease is still under investigation.

YAWS (FRAMBOESIA).

Yaws is present throughout the Philippine Islands, but it is believed that the disease is more extensively found among the wild tribes than among any other one class of persons. Salvarsan has been furnished free on application and through its use many persons were cured of this disfiguring disease. Salvarsan has given the same satisfactory results in the treatment of yaws as have been reported heretofore.

EXTRACTS FROM REPORTS OF DIVISION CHIEFS.

The following division reports are extracts from the annual reports of the chiefs of the various divisions of the Bureau:

BAGUIO HOSPITAL DIVISION.

The twelve months ended June 30, 1912, complete the fourth year of service of the present or new Baguio Hospital. The statistical tables printed in another part of this volume show the amount of work accomplished during the year.

COMMUNICABLE DISEASES.

A case of smallpox was discovered at Camp 5 in November. Prompt measures were taken against the disease, and no other cases developed. A few cases of varioloid appeared from February 29 to May 12. It was, apparently, imported direct from Manila.

Thirty-four cases of measles were registered from February to June.

During the year, four Igorots afflicted with yaws, voluntarily presented themselves for treatment. One injection of salvarsan proved sufficient to effect a cure in each instance.

The most serious disease encountered was bacillary dysentery, which broke out among the laborers on the new railroad project. Forty-two cases were treated in the hospital, with a mortality of 26 per cent. In the majority of the cases the Shiga-Kruse bacillus was demonstrated by the Bureau of Science bacteriologists. Investigation seemed to indicate that flies were an important factor in the spread of the disease.

The usual amount of acute diarrhoea was not encountered during the past season, notwithstanding the fact that more persons visited the summer

capital than ever before. A new water supply probably aided materially in preventing the disease.

SANITATION.

More active work to improve the sanitation of Baguio has been undertaken during the last half year than ever before. A vigorous campaign against flies and mosquitoes was conducted with the result that they have been largely exterminated. The pail and garbage collection systems have been extended to all parts of the town; three incinerators have been installed and are in daily use destroying refuse. Surveys for a sewer system have been made, and the installation of the same recommended by a committee appointed by the Governor-General.

A total of 575 patients were admitted during the year, and 6,818 visits to the hospital clinic were made; 7,124 vaccinations were performed in the province; 18 cases of tuberculosis were treated, in 4 of which the disease was arrested.

BONTOC HOSPITAL DIVISION AND MOUNTAIN PROVINCE SANITATION.

Sanitary water-closets have been installed on Bontoc, Cervantes and Quiangan, and their use made compulsory. The sanitary disposal of garbage is being carried out in Cervantes and the Christian portion of Bontoc.

In all of the subprovinces the Bureau has assistant sanitary inspectors, acting as practicanes, in charge of dispensaries. Approximately 12,000 persons have been treated in these dispensaries during the year.

Wards for the care of the sick are maintained in Cervantes and Quiangan.

The usual so-called "rice dysentery" prevailed during May and June, but examination revealed the fact that it was acute bacillary dysentery. Boiling the drinking water quickly stopped the epidemic.

Gonorrhoea assumed epidemic proportions in the subprovince of Ifugao from November to February, after that date only sporadic cases occurred.

About 75 cases of yaws were treated with salvarsan, and, with two exceptions, cures were attained with one injection.

Malaria is epidemic in Kalinga and Quiangan. Quinine is being generously administered and it is believed that, with the advent of the rainy season, the stagnant water will be washed out of the rice paddies and the situation relieved in the elevated regions.

A party of three Igorot vaccinators under the supervision of an American sanitary inspector has vaccinated more than 40,000 persons since January 1.

Inspection trips are made regularly and often as many as 40 sick persons are treated during the trip.

The Bontoc Hospital opened its doors to the public on February 2, 1912. It is a one-story brick structure and consists of 2 pavilions 30.6 by 13.5 meters parallel to each other and separated by nearly 10 meters. The two wings are connected by a corridor. The windows are of the shell type and are set in red narra frames. Modern plumbing is being installed; the waste draining into a septic tank.

Upon completion of the nurses' home the hospital will have 5 private rooms, 8 of them double, and will accommodate 30 ward patients which number may be increased to 40.

Since the opening of the hospital in February, 280 patients have been admitted with a total of 3,193 sick days. The staff consists of a chief, a pharmacist, a superintendent and housekeeper, a chief nurse, and three Filipina graduate nurses.

The out-patient department has given 5,492 treatments to 1,561 persons since January 1.

BUTUAN HOSPITAL DIVISION.

The Butuan Hospital was opened for the reception of patients July 16, 1911, and from that date until June 30, 1912, a total of 39 patients was admitted, the admissions being properly restricted to the most urgent cases on account of the limited number of beds. There were admitted three other persons, two, relatives of patients, and a child whose father was sentenced for a short time to the provincial jail, but these were not counted as patients.

In the dispensary department of the Butuan Hospital, there were treated 833 patients. Outside of the dispensary 342 patients were treated in 15 different pueblos, by the district health officer in charge of the Butuan Hospital, which makes a total of 1,175 dispensary patients.

In addition to the dispensary service, quinine distributing centers were maintained at Butuan, Cabadbaran, Talacogon; at the offices of the assistant governors of the districts of Omayan, Hibong, and Bunawan; the division superintendent of schools, the home of every teacher in the province, and at all the rancherias, thus making it possible for quinine to be obtained free of charge and at the cost of very little effort by every person in the province who needed it.

Butuan Hospital, situated in the capital of the wild man's country, and the complete health organization in operation, are the advance signs of a rapidly approaching civilization and enlightenment which a competent administration, an uplifting educational scheme and a life-saving sanitary organization are hastening on for the pagan people, and for all the people of the wild man's land.

CLERICAL DIVISION.

The past year has been noticeable as a year in which the results of the work of organization of previous years have begun to bear fruit. It is becoming less and less necessary to call the attention of officers and employees to carelessness in following instructions. That employees have become more familiar with laws and regulations and acquired more initiative in adjusting small matters without reference to this office has been shown. Different automatic systems of forwarding reports, samples and vouchers have been developed and simplified. Methods of communication and transportation have been enlarged and in all general cases employees now understand what to do and how to do it. This improvement is noticeable as well in provincial and municipal organizations.

Naturally, the fewer details to be given attention, the more time remains for improvements, inspection and inaugurating new systems. It is believed that the *esprit* of the Bureau is firmer now than it has ever been.

The financial work of the Bureau has received a large amount of attention during the year and is attaining a more satisfactory basis. The combination of property with money accounting has been developed and is believed to be of great benefit.

The failure of the Legislature to pass appropriation acts is found to be detrimental. As the Government becomes organized and reaches out to take hold of new propositions it requires a more mobile personnel and adequate means of enabling itself to do the work found to do; an appropriation act passed in 1910 will not fit with the work planned in 1918. Thus the General Hospital has been much hindered in its work by trying to do with few and temporary employees when it should have had more better paid and permanent employees. This has now been remedied by the allotment of the Governor-General, but there is a general feeling of uncertainty regarding appropriations which is not conducive to good work. The employees of the General Hospital who remained on duty, as temporary employees, awaiting the readjustment of positions are deserving of great credit for faithfulness under difficulties.

The shifting of permanent personnel becomes less as the years go by and is approaching the period when a certain percentage may be counted upon as the limit of movement. Filipino employees are becoming more efficient and American employees more settled.

During the year provincial record systems have been insisted upon, improvement in records made in outlying divisions and the back records of the central office bound up to a working limit.

It is believed that the greatest improvements apparent in the Bureau are due to the thorough inspections made by the Director of Health. A general tightening up of districts after inspection has been very noticeable and but emphasizes the need, which has often been discussed and delayed for lack of proper personnel, of constant inspection of the field force. It is believed that the coming year is the psychological period for the inauguration of a system of constant, thorough and unexpected inspection of all districts, hospitals and divisions. It is believed that such a movement will crystallize the work of previous years in such a way that the work will go forward with a bound.

The financial report will be found under Statistics.

CULION LEPER COLONY DIVISION.

The past twelve months have undoubtedly constituted the banner year, from a building standpoint, in the history of the colony; more new concrete buildings have been erected than during the previous five years of the colony's existence. Ten concrete structures have been completed, four carried to completion from an unfinished state, and three are at present under construction.

The leper labor was placed under the immediate supervision of Mr. M. J. Whalen, during the early part of the year, and very gratifying improvements, along the lines of sanitation, beautification, and permanent improvement have resulted under his efficient management. The insignificant amount of two days' work of four hours each, has been required of each able-bodied leper, per month; this amount of work in the colony—the requirement should be doubled, yet the aggregate of work accomplished during the year was surprisingly large.

Sanitation.—Very gratifying results have been obtained from a sanitary standpoint. The tin can and bone piles of ancient days are now nuisances of the past and the omnipresent, evil smelling, wooden water closets are rapidly being replaced by modern concrete toilets with shower baths attached.

The garbage was collected, the combustible portion of it burned and the residue placed upon a raft after which it was towed out to sea and thrown overboard. This rather unsatisfactory method of disposal will, hereafter, be unnecessary inasmuch as a new concrete and brick garbage crematory has been completed. All garbage will, henceforth, be burned and it is hoped that the indestructible portions will be reduced to slag so that it may be utilized as a body for street foundations.

Improvements in the colony.—The old convent was torn down; seventy-four houses of nipa and wood were constructed; about seventy-five houses were demolished; nipa roofs were placed on a number of the hard material and the majority of the nipa houses, more than 150,000 nipas being used for this purpose; galvanized-iron roofs were painted twice and woodwork in concrete houses oiled or treated with shellac; concrete structures were washed with cement paint when the surfaces became soiled; a number of the old bamboo cook sheds were torn down and two new ones constructed with galvanized-iron roofing; two pairs of handsome concrete steps were constructed, one pair leading to the church, the other to a point near the new store; about 4,000 plants and shrubs were planted in the colony and Balala; five tenement houses were erected, four of which are located on the new plaza site; the new store and post-office was carried to completion from a point several inches below the first floor girder; a new concrete toilet was erected near the "presidencia;" the Tabuk water reservoir was practically rebuilt and the entire pipe line straightened and tarred; a 9,000-gallon water tank was constructed in the colony to act as an auxiliary supply; an attractive concrete morgue was constructed near the south end of the hospital; a new concrete and brick garbage crematory was practically completed; nearly 10,000 cubic meters of earth were removed from the new plaza site; a cement disinfecting tank for beds was constructed near the hospital; nearly 1,000 lineal meters of storm-water drains were laid and many other minor improvements accomplished.

In Balala.—The employees' mess hall and kitchen were completed, and a bake oven with a capacity of 500 loaves of bread built in connection; a laborers' kitchen was built under the same roof that covers the bake oven; a concrete residence for the chaplains was constructed with the exception of the foundation; this is the most attractive building erected in Balala to date; an additional bodega shed was constructed; a new sailboat was built and all the water craft overhauled, repaired, and painted; about 4,500 cubic meters of earth fill was made along the water front and on the pier, 135 lineal meters of concrete storm water drains were constructed; three nipa sheds were removed; a concrete waterway was begun to divert the deluge of water that was formerly precipitated into the chief's yard upon the occasion of each hard rain; 1,300 concrete grave-stones were made; nearly 30,000 feet of lumber was cut during the latter half of the year.

The colony cemetery is practically full. A new plot, larger than the present cemetery, has been staked out, which, when approved, will meet the needs of the colony for several years.

Probably no other measure adopted during the year created such universal satisfaction as the furnishing of good fresh bread to the colonists and employees. Its beneficial effects were at once apparent when its use was begun during the epidemic of beriberi during March and April, the number of cases dropping to almost nil within a short time.

During the month of October 12 colonists were sent to Manila apparently

cured of leprosy, two of this number were returned later. These cases had been under the chaulmoogra oil form of treatment.

The moral tone of the colony and of the employees in Balala during the year, was, on the whole, very satisfactory. The colonists, in the majority of instances, took kindly to the rule requiring them to work two days per month. It is believed that the time is approaching when lepers will petition to be sent to Culion instead of to San Lazaro Hospital and when they will voluntarily present themselves for transfer to Culion. During the past year at least five theatrical performances were presented and enjoyed by the colonists. There is no lack of the athletic spirit as track meets and especially baseball games are frequent occurrences.

INSPECTION DIVISION.

The work of the inspection division might be subdivided as follows: House to house inspection for sanitary condition and presence of communicable diseases, etc.; inspection of dairies, laundries, bakeries, tobacco factories, etc.; disinfection; mosquito extermination; rat extermination; physical examinations; collection of samples for routine examination; food and drugs; sanitary matters; presidents of municipal boards of health; school inspection; and special inspections and investigations.

During the year 25,469 houses were inspected; 9,040 disinfections were made, for different causes; action was taken on 8,002 applications for licenses to conduct different lines of business; 16,986 rats were caught and those not in a too advanced stage of decomposition sent to the laboratory of the Bureau of Science for examination.

The mosquito extermination squad has been very active and has succeeded very well in keeping down the common domestic mosquitoes, namely the *Culex fatigans* and the *Stegomyia persistans*, in Manila. The efficiency of the work of this squad could be greatly increased if a better oil for the purpose could be obtained.

Much time has been spent on food and drug products, both of local and foreign origin.

School inspection has been placed on a sound basis and is progressing very satisfactorily.

At the time that the main supply pipe was broken and Manila was compelled to use the filthy Mariquina water, inspectors were sent to patrol the watershed and make house to house inspections of the different municipalities with a view towards preventing the pollution of the water. During the month of July assistant sanitary inspectors were detailed to the municipalities of Lipa and Bauan, Batangas, for the purpose of investigating cases reported suspicious for cholera, and correcting insanitary conditions. During the slight cholera epidemic in La Union Province assistant sanitary inspectors were detailed to that place to work under the district health officer in combating the disease. Assistant sanitary inspectors were also detailed in Calamba, Laguna, for the purpose of making special investigations and correcting insanitary conditions. In addition to this, assistant sanitary inspectors have been detailed as vaccinators in the Mariquina Valley, the Island of Masbate, and the Island of Busuanga, and numerous investigations have been made in nearby municipalities relative to the presence of communicable diseases, sources of milk supply for the city of Manila, etc. Upon the request of the company interested, a medical officer was sent to Paracale, Ambos Camarines, to investigate a report of an unusual amount of sickness in that place,

especially dysentery. It was found that, while there had been deaths from dysentery, conditions were not as bad as were supposed, but, on account of the probabilities of bad water for drinking purposes, and the presence of malarial fever, recommendations were made which, if carried out, would better conditions.

The Bureau of Health has also been placed in charge of the sanitation of the camps in connection with the construction of the new railroad to Baguio, as well as of the treatment of the employees.

A sanitary inspector has been constantly in charge of the mosquito exterminating squad, while another sanitary inspector has been performing duties in connection with the Board of Food and Drug Inspection, exclusively.

There has also been detailed to the Government ice plant throughout the year an assistant sanitary inspector to supervise the employees relative to sanitary matters.

Much time is consumed in the office in handling the matters relative to cemeteries and the presidents of the municipal boards of health.

The number of physical examinations has greatly increased during the year mainly due to the fact that chauffeurs are now required to be examined and licensed. The report is published on page 52.

Distribution of personnel of the office of the Assistant Director of Health, June 30, 1912.

	Medical inspectors.	Municipal physicians.	Sanitary inspectors.	Assistant sanitary inspectors.	Sanitary police.	Disinfectors.
Station "A".....	1	3	2	26	6	6
Station "C".....	0	2	2	18	2	0
Station "I".....	1	1	1	11	4	0
Station "J".....	1	1	1	12	3	3
Station "L".....	1	1	1	7	3	0
Sanitary engineering division.....	0	0	3	1	0	0
Provincial duty.....	4	0	2	4	0	0
San Lazaro Hospital.....	1	0	0	0	0	0
Philippine General Hospital.....	1	1	0	1	0	0
Bilibid Prison.....	1	0	0	0	0	0
Office assistant Director of Health.....	0	0	0	0	0	0
Mosquito service.....	0	0	1	9	0	0
On leave.....	4	0	0	0	0	0
Special duty (Food and Drugs).....	0	0	1	0	0	0

PHILIPPINE GENERAL HOSPITAL DIVISION.

[Extract of the report of the superintendent.]

INCOME FROM OPERATIONS.

The income from operations will be found in the financial statement of the Bureau in the appendix.

IMPROVEMENTS.

Considerable has been accomplished in the way of improvements, which, for convenience, will be enumerated in the order of their importance:

A service building which provides, among other things, living quarters for male pupil nurses, was opened early in February, and has proved to be a desirable acquisition.

A temporary dormitory for pupil nurses, has been secured by remodeling one of the buildings of the Normal School.

Two wards have recently been opened for admission of patients; and, while the total bed capacity has not been materially increased, the congested condition of all other wards is somewhat relieved, and the hospital presents a more normal appearance.

The Bureau of Science branch laboratory has been removed from the dispensary building, and transferred to a more convenient location in the operating pavilion, floor 15.

An information desk, embracing physicians' call bells, telephone system, and ambulance alarm, has been installed in the rotunda of the administration building. This department is under the direct supervision of the chief clerk, and operated by three information clerks, working in shifts of eight hours each.

Private offices for the superintendent and chief nurse are now complete, and very acceptable. The front portion of the main office, has been partitioned off with a suitable grill, thus providing some privacy for the cashier and his assistants.

The appearance of the grounds has been greatly improved by the addition of trees, shrubbery, and lawns.

Plans for the enlargement of the free dispensary are under way; and it is hoped that this construction will be completed at an early date.

A residence for the superintendent of the hospital has been approved, and plans practically completed.

The hospital accounting system, recently inaugurated, is a modification of the one generally adopted by representative institutions in the United States. Among other things, it provides for an accurate accounting of departmental expenditures, with a suitable classification of all receipts from operation. The various incomes are immediately accounted for by the use of special charge forms, conveniently classified by color, while the system of consecutive numbering in triplicate form, protects the hospital against possible loss. The lavish credit system heretofore in vogue, has been curtailed to a point within reason, and a comparative analysis of the monthly cash income report will furnish sufficient evidence in favor of the change. Property accounting is now established on a more substantial basis.

The hospital diets show sufficient improvement to warrant the continuation of a system known as "detailed supervision"; and when a competent dietist has been secured to personally supervise the special features, this department will be able to properly serve the needs of the institution.

Some change has been inaugurated as regards the housing of male helpers. Heretofore, they occupied quarters within the institution, and were also furnished subsistence. This plan may have its advantages, provided isolated quarters are available, but, as rather extensive construction would be necessary, it was decided to permit this class to live outside the institution.

The Training School for Pupil Nurses continues the creditable work of the past, a report of which has been presented by the superintendent of that department.

RECOMMENDATIONS.

Accommodations for patients. A perusal of the statistical tables, showing the number of "patients refused admission on account of no accommodation" should be sufficient argument in favor of a new pavilion. A

maternity home would, undoubtedly, be the logical construction: and it is recommended that this be authorized.

Pupil nurses' dormitory. The growth of the hospital proper, will, of course, demand increased accommodations for pupils in training, and a building, similar to the present nurses' home would be very desirable.

A playground for children. This could be arranged at small expense, provided the hospital grounds were entirely closed to the public.

The private room capacity on floor 3 is inadequate for the needs of the institution, and it is pointed out that four extra rooms (two with private bath) may be provided by suitable reconstruction of ward 308. All private rooms should be suitably decorated, and those with bath equipped with sanitary toilet fixtures.

A portable phone system would be well adapted to our requirements; and it is recommended that same be installed for private room service.

A silent signal system for notification of physicians and nurses has been placed in large institutions throughout the States, and found to be very satisfactory. It is recommended that this particular system be installed, as it provides several features which are especially adapted to our work.

The expense of operation is unusually high, which may be partially accounted for by the fact that persons who are well able to pay for treatment, receive same on a charity basis. This practice, if continued, will only serve to injure those who receive charity, and increase the cost of operation.

A plan to relieve this undesirable condition suggests itself in the form of a twenty cent charge for prescriptions, which sum will cover the cost of the average bottle, cork and label, or dressing, as the case may be. Attention is invited to the present policy of extending the charity services of this hospital to employees of large corporations; and, in an attempt to remedy this evil, it is suggested that a reduced rate be authorized, provided, that the employer guarantees the amount. Two pesos per day is suggested as a proper charge.

The present rates of compensation for the personnel are not such as will attract the most desirable men for this work, and when one considers the exacting demands of hospital service, together with continuous long hours, irrespective of Sundays and holidays, it is reasonable to believe that efficient services will not be secured unless some allowance is made for the above-mentioned conditions.

The method of securing supplies for the hospital, especially commissary items, is far from satisfactory, and on several occasions the service has been seriously handicapped by reason of delayed or incomplete deliveries. The hospital management has no authority to make emergency purchases, and anyone familiar with hospital requisites will readily understand that such a condition can only serve to interfere with the proper care of the sick. Any delay in furnishing treatment to a patient is inexcusable, and yet permission has to be secured from the Insular Purchasing Agent before an emergency order can be placed. Attention is invited to the fact that on Sundays, holidays, and after regular business hours, it is not possible to communicate with the Purchasing Agent's department. It is recommended that a sum of money (not to exceed \$100) be placed at the disposal of the superintendent, who may make such emergency purchases as conditions require, rendering an account of same monthly.

In conclusion, attention is invited to the fact that during the year just

closed 772 Government free patients were treated, for which no compensation was received. In order to show a fair return for operation it is suggested that each Bureau be made liable for any indebtedness incurred by employees of the above-mentioned class.

EXTRACT FROM REPORT OF CHIEF OF CLINICS.

The growth of the hospital and free dispensary has been so rapid during the short period of its existence that there has been constantly more or less confusion in its organization and this confusion has been accentuated by the difficulty, and in some instances, impossibility, of securing a sufficient qualified personnel.

The disorganized condition of affairs of the institution culminated in a personal investigation by the honorable the Secretary of the Interior, during the months of September and October, 1911. As a result of this investigation a majority of the problems of the institution have been solved, the organization has been much improved and altogether the workings of the hospital are in a much more satisfactory condition. Personnel.

The professional personnel of the hospital is made up by detail from the teaching faculty of the College of Medicine and Surgery, University of the Philippines, and from the force of the Bureau of Health. It consists of a nonresident staff, a house staff, and interns. Owing to the exigencies of the service, the changes in personnel of the hospital have been entirely too frequent for the most efficient service. The number of men on duty on the permanent house staff is entirely too small to meet the demands of the institution. With one or two exceptions the work of individual physicians has been satisfactory, and, in many instances, long hours of overwork have been fulfilled in the proper spirit.

REPORT OF DEPARTMENTS AND DIVISIONS.

Out-patient department—Free dispensary division: The growth of this division during the fiscal year has been phenomenal. During the year 1911 there were treated in this division, 24,335 patients composing 11,375 individuals, and the dispensary pharmacy filled 39,178 prescriptions.

During the fiscal year 1912, the division handled 64,673 patients composing 25,171 different individuals and there were 83,517 prescriptions compiled in the Pharmacy.

Owing to incompleteness of the 1911 records, the number of minor operations and dressings was not reported. For the year 1912, there were 779 minor operations in the surgical clinic, and 16,612 dressings. There were 18 minor operations and 84 dressings in the department of eye, ear, nose and throat. (The majority of operations and dressings for this department are recorded in the hospital statistics.)

Previous to April 1, 1912, no separate record was kept of the Government employees applying for treatment at the free dispensary. During the three months from April 1 to June 30, 1,418 Government employees were cared for at the free dispensary.

Visiting and office consultation division: There are no records for this division prior to November, 1911. During the latter eight months of the fiscal year there were 8,368 official office consultations and 213 outside visits by members of the hospital staff delegated for this purpose.

Department of eye, ear, nose, and throat.—There is no report for this department for the year 1911, and the appended table explains the operations of the department for 1912. Attention is invited to the enormous amount

of work, including 925 major operations; 1,440 minor operations; over 11,000 dressings; and 1,128 refractions of the eyes, performed almost entirely by Dr. Rembe with only one assistant.

Department of surgery.—The report for 1912, including the anæsthesias, is shown in the appended table.

Electro-therapeutic division. During the year a more complete record system was installed. The annual report covering the workings of this department for the fiscal year 1912 is outlined in the appended table.

Department of obstetrics.—This includes the hospital cases of the department of obstetrics of the College of Medicine and Surgery.

Attention is invited to the rapid development of this department. Only one year ago it was difficult to persuade Filipino women to come to the hospital for confinement, and at the present time our charity ward of 25 beds for this purpose is practically filled all the time. The appended table shows numerically the operations of this department.

Department of medicine.—The department of medicine has no special report to make. Its workings should be included in the index of diseases cared for during the fiscal year. The index of diseases has not been completed for two reasons; first, because of the lack of properly trained clerical help, and second, because a system of nomenclature of diseases satisfactory for the hospital has only been completed within the last month.

EXTRACT FROM REPORT OF THE SUPERINTENDENT OF THE TRAINING SCHOOL FOR NURSES.

At the graduation exercises on April 9, 1912, thirty-five Filipina women were given the degree of graduate nurse. Twenty-one of these young women had completed a four-year course of training and fourteen a two and one-half years' course. All of the latter returned to the school to take up a six months' post-graduate course in the branches of nursing in which they may desire to specialize, as, for instance, district nursing, operating-room work, obstetrical work, anæsthesia, etc. Those who completed the four-year course have been given civil service appointments in the Bureau of Health and assigned to the various hospitals in the Philippine Islands. Three were detailed to the hospital at Baguio; two were sent to Cebu to do district nursing; two were assigned to the San Lazaro Hospitals at Manila; five were sent to the Bontoc Hospital; and the remainder given positions as nurses at the Philippine General Hospital. Of the latter, one has charge of the dispensary; one is assistant chief nurse of the surgical department; two are detailed as head nurses of the operating room; two have charge of the dietetic department and kitchen; and the remainder have been assigned to general duty as head nurses in the wards.

The work of these young women during their training and afterwards has been very satisfactory. In all assignments they have given willing, cheerful, and efficient service and have proved themselves well adapted for the profession of nursing.

Only one of the 1912 graduates has left the service and that only to continue her education with the object of taking up the study of medicine in the University.

It has been found impractical to include in the short period of two and one-half years, the training which young men and women should have to make them capable supervising nurses. Therefore the course has been extended to three and one-half years in order to give an opportunity for the student nurses to do special work during their senior year. The course

has been extended considerably and it is hoped to enlarge it still further in the near future.

EXTRACT FROM THE REPORT OF THE SUPERVISING NURSE.

The number of appointments during the year was: Americans, 24; Filipinas, 21. The number of resignations was: Americans, 11; Filipinas, 0. The number of promotions was: Americans, 17; Filipinas, 6.

In pursuance of the policy set forth in the circular of information issued to nurses in the United States, two nurses in the civil service nurse corps were selected to fill the position of hospital superintendent. One was sent to Baguio Hospital and one to Bontoc Hospital. It is the intention of this Bureau to fill such positions in all the hospitals which may be opened in the future from the same corps.

The present year saw the completion of the nurses' homes at Baguio Hospital and San Lazaro Hospitals and the nurses of these institutions are now comfortably housed in their own quarters.

The new dormitory for male nurses located on the grounds of the Philippine General Hospital was completed in February, and occupied in March, of this year and these young men are now enjoying the benefit of the finest set of bachelor quarters in the Orient.

A commodious and attractive dormitory for Filipina pupil nurses is now complete and will be ready for occupancy in a very few days.

The Bontoc Hospital was opened in November with an American graduate nurse as superintendent, and the work has progressed so much, that a staff of two American and five Filipina nurses are found inadequate to accomplish the work.

It is the intention of this Bureau to supplement the work of this hospital by provincial traveling nurses who speak the Igorot and other dialects of this northern country. There are several such nurses in the Philippine Training School and as soon as they graduate they will be ready to take up this branch of nursing, which is an altogether new, but a very desirable branch of usefulness for earnest, hardworking nurses.

The Cullion Leper Hospital was visited three times during the year, on one occasion a stay of nearly a month was made, thus making it possible to open a diet kitchen and train a cook in invalid cooking of a simple nature.

A system of hospital housekeeping was inaugurated, whereby the hospital is given a daily scrubbing inside and out, by the lepers, who are sufficiently able-bodied to do such work. A weekly disinfection of all hospital furniture by a scrubbing with soap and water, followed by complete immersion in a large tank of bichloride solution makes a very perceptible decrease in the characteristic leper odor, in and about the hospital.

The corps of nurses at the Philippine General Hospital has been increased by the addition of eleven American and twenty-eight Filipina graduate nurses.

A course for post-graduate study is now offered at the Philippine General Hospital and now has an enrollment of eighteen, fourteen of whom are graduates of the Philippine Training School and 4 from other training schools in the Philippine Islands.

Through the kindness of Mrs. E. M. Simpson, superintendent of the Illinois Training School for Nurses, and Miss Sara E. Parsons, superintendent of the Training School of the Massachusetts General Hospital,

the graduates of the Philippine Training School for Nurses will be accepted in the post-graduate schools of these institutions.

These hospitals grant a diploma and recommendation to any nurse completing their course satisfactorily.

It is respectfully suggested that due provision be made for the travel expenses and maintenance, of two or more graduates of the Philippine Training School at each of these institutions, yearly; provided that the nurse so honored be willing to remain one year in the employ of the Bureau of Health after returning to these Islands.

The San Lazaro Hospitals have offered excellent opportunities to pupil nurses, owing to the great variety of dangerous communicable diseases treated there during the year.

Bilibid Hospital has continued to do good work under the able supervision of the nurse who has had charge of it for the last four years.

In this connection it is earnestly recommended that an effort be made by this office to have a matron of some sort employed in every provincial jail where women prisoners are detained. At present some provincial jails have women prisoners, sick prostitutes and insane women crowded into dark, insanitary rooms, without the supervision of a woman.

Municipal hospitals also treat women patients; but do not employ a matron, such a condition is intolerable and should be corrected at once. It costs no more to employ a clean, intelligent, capable Filipina woman, than it does to employ the incapable practicas now in charge of some of these hospitals. While this office is not responsible for such conditions it is thought proper to call the attention of the Director of Health to them, that he may use his influence to have them placed under proper control.

The president of the University of the Philippines has signified his willingness to add to the university courses a teacher's course for nurses, similar to the course now offered by the Columbia University. This course will lead to the degree of bachelor of science and will be open to all duly registered, graduate nurses.

The alumnae of the Philippine Training School have formed an association for their mutual aid, protection, and advancement, to the end that they may bring a knowledge of cleanly, sanitary, and hygienic living to the poor and ignorant wherever they may be found.

In pursuance of this object they desire to present to the coming Legislature the following bill for the registration of nurses, entitled "A bill providing for the appointment of a Board for the examination and registration of nurses in the Philippine Islands."

It has been the long cherished plan of the Bureau of Health to see every province and every municipality of these Islands supplied with graduate Filipina and Filipino nurses who would be able to speak to the various tribes in their native language.

Owing to the recent graduation of a large class of Filipina nurses, it has become possible to begin the organization of this work. In May of this year the provincial board of the Province of Cebu, at the suggestion of the district health officer of the province, approved the appointment of three graduate Filipina nurses. Two of these appointments have been made and the third will be made very shortly.

The duties of the district nurse will be to visit every town in the province and after consulting the birth records make a house to house inspection.

tion of the homes of the newborn and make every effort to ascertain the conditions under which the infants are living. Should she find conditions detrimental to the health of mother or child she will by suggestion, advice, and instruction endeavor to change these adverse conditions to others sufficiently hygienic to enable an infant to thrive. When the infant is bottle fed, the nurse will instruct the mother in the preparation of infant food, the care of bottles, nipples, etc., the necessity for absolute cleanliness of all utensils used, as well as the hands of the person preparing the food. Where the infant is breast fed they will instruct the mother in the matter of diet, personal hygiene, etc.

In every case the nurse will instruct the mother in the care of the infant and will, wherever possible, make several visits to see whether the instructions given are being carried out.

In case mother or child needs the care of a physician and is unable to pay for such care, the nurse should refer them to the municipal physician or the district health officer.

Nurses will invite mothers to neighborhood meetings and instruct them in the matters of infant feeding, care of the new-born, care of the infant, care of the child, and care of the mother during pregnancy and labor. They will, if possible, attend all poor women in child-birth, who request their services and will care for mother and child for five days after birth; in all such cases the mother should be carefully instructed before the nurse ceases her visits.

When the district health officer deems it necessary he may send the nurses to the public schools to give lectures on infant feeding, segregation of contagious diseases, personal hygiene, etc.

A nurse will visit the provincial jail weekly and examine the quarters and persons of the women prisoners and make a report thereon to the district health officer.

She will instruct the women in personal hygiene at each visit and endeavor to have them live in a hygienic manner during their term of imprisonment.

The nurse shall note the sanitary condition of every house she visits and in case conditions are detrimental to mother or child she will endeavor to improve them by suggestion, advice and instruction, and, if necessary, she can report to the district health officer such conditions as may need special attention from him.

The nurse shall observe during her rounds the presence of communicable diseases, deformities or conditions which are likely to be helped by medical or surgical treatment; if possible she should induce the patient to go to the hospital or dispensary, or if this is not possible, she shall report the matter to the district health officer.

Where tuberculosis is known to be in any house the nurse will make an effort to meet the patient and instruct him in the proper hygienic measures to be observed in order that he may make a recovery and to prevent the spread of the disease to friends, relatives, or others.

The nurse shall write a daily report of her work and will submit it once a week to her immediate superior for approval.

In addition, the nurse will do everything in her power to bring to the homes of the poor as much knowledge of household and personal hygiene and household nursing as it is possible to gain in this manner.

In connection with this work it is earnestly recommended that every province or municipality employing district nurses should build a settlement house where the nurses can invite the mothers to meet and compare notes, weigh babies, receive instruction and observe the nurses living in a simple yet hygienic manner. It is believed that the knowledge obtained by this practical demonstration costs less and lasts longer than that obtained in any other way.

Nurses shall in case of epidemics of dangerous communicable diseases hold themselves ready to faithfully perform such duties and render such aid as the district health officer may direct.

PRISON SANITATION DIVISION.

The cases of dangerous communicable diseases that occur at Bilibid were formerly sent to San Lazaro. They are now cared for in sheds near the hospital. A concrete building will soon be erected for this purpose.

Two new bridge buildings were constructed during the year and are satisfactory from a sanitary standpoint.

The quarters occupied by the Presidio women have been considerably enlarged during the year by utilizing an adjoining room. The ventilation was materially improved by cutting a series of windows between the rooms. The women's quarters have been whitewashed throughout.

The cell houses were formerly dark and illy ventilated. During the past year new roofs provided with ventilators have been put in place.

The low ground to the east of the prison wall is in process of being filled with street sweepings. This is sprinkled with kerosene oil and covered with soil daily.

Permanent concrete cuspidors have been conveniently placed about the grounds. They are provided with removable metal receptacles and covers.

Storm water is carried off by open surface drains which empty into the estero. They are swept and flushed daily. All flush closets, urinals, kitchen and hospital sinks empty into the city sewer.

Garbage is collected in barrels and removed daily. While awaiting removal it is stored in screened sheds.

All new arrivals are disinfected and placed in quarantine for five days. During the quarantine the feces of each prisoner is examined, and, if found positive for parasites, he is sent to the hospital for attention. They are vaccinated upon arrival and all contacts are immediately given the same treatment. The entire population is vaccinated annually.

A disinfecting squad has been assigned to the hospital for duty as disinfectors. These men, in addition to disinfecting buildings after the discovery and isolation of cases of communicable disease, are daily engaged in routine disinfection of brigades passing from one brigade to the other.

All floors, walls, and bunks are cleaned with a disinfecting solution, and blankets and equipment are placed outside in the sun. Upon discovery of a communicable disease in a brigade, an inspector of the prison is notified of the fact, and immediately isolates all occupants of that brigade. As soon as practicable, all prisoners from such brigade, together with their blanket rolls, mess tins, and other equipment, are marched to the hospital inclosure and put through the large disinfecting tank. The brigade itself, is then disinfected before the inmates are permitted to reenter.

All newly arrived prisoners are disinfected before being sent to quarantine. Hospital beds are disinfected weekly, after death, and after communicable diseases.

The good results of routine disinfection of brigades are apparently demonstrated by the rapid reduction of cases of communicable diseases following routine disinfections which were begun during March, 1911.

Able-bodied Oriental prisoners, in addition to their work, are daily put through a series of setting-up exercises, except when sick in hospital or excused on account of physical disability. This, undoubtedly, has contributed largely to the general health of the prisoners by bringing about a greater lung expansion, and better muscular development, thus enabling them the better to resist disease.

Tubercular patients, and patients convalescing from general diseases are required to exercise in the hospital garden daily. Those whose physical condition permit, are assigned to light duty about the hospital and grounds.

During the past year, much has been added to the hospital equipment, including the following: A new operating table, many new instruments, glass-top tables, glass case for dressings, enameled washstands for hand solutions, etc.

The operating room has been freshly painted and fitted with Osram 50 candle-power electric lights. A fresh air tent with a capacity of 10 beds has been erected in the hospital enclosure, for the open air treatment of such acute cases as may be considered advisable.

The various buildings, prison baths, etc., about the prison are supplied with city water. The supply is ample, with the exception of the hospital, which is supplied from a separate pipe leading off from the Cervantes main. This pipe does not furnish sufficient water for the needs of the hospital, as the pressure on the second floor is insufficient properly to flush the closets. A larger supply pipe is recommended.

All drinking water is distilled at the central boiling plant, thence distributed about the prison in locked metal cans provided with faucets. The water is hot when put into the cans, and being drawn therefrom by means of faucets, there would appear to be no means of the water becoming contaminated before drinking, except by grasping the drinking-cup in such a manner as to allow contamination from the fingers.

IWAHIG PENAL COLONY (PRISON SANITATION DIVISION).

The work of segregating the tuberculosis cases which are most dangerous has been begun with the erection of two additional pavilions accommodating fifty cases and further work of this nature will be continued at Camogong barrio where two small cottages are now completed which are occupied by some sixteen tuberculosis cases able to do gardening and light work. This barrio is about one mile from the nearest barrio of nontubercular cases.

Sleeping barracks have been built at Malamig, Esperanza, and, for the men employed in road making some eight miles from Iwahig on the Inagaun trail.

A screened dormitory for malarial cases carrying gametes should be constructed at the central colony.

PROPERTY DIVISION.

During the year, 649 general requisitions were received and filled from the following sources:

Provincial requisitions	187
Health stations	114
Central office	18
Sanitary engineering division	26
Assistant Director's office	9
Statistical division	7
Board of Medical Examiners	1
Central Free Dispensary	15
Philippine General Hospital	81
San Lazaro Hospital	9
Prison sanitation division	16
St. Luke's Hospital	14
Mary J. Johnson Hospital	8
San Juan Tuberculosis Hospital	10
Culion leper colony division	33
Baguio Hospital division	14
Iwahig penal colony	17
Bontoc Hospital division	26
St. Paul's Hospital	3
Southern Islands Hospital	2
Sibul Springs Sanatorium	12
Divisoria nurses' dormitory	18
Antituberculosis Society	3
Santo Tomas University	6
Total	649

From other Bureaus and individuals there were received and filled 194 requisitions for supplies which were paid for by the requisitioners.

Sixty-one requisitions for commissary supplies were received from the following sources:

Philippine General Hospital	16
San Lazaro Hospital	11
Divisoria nurses' dormitory	13
Baguio Hospital division	8
Culion leper colony division	13
Total	61

These required the issuing of orders under the "direct order and payment system," as follows:

Philippine General Hospital	142
San Lazaro Hospital	82
Divisoria nurses' dormitory	71
Baguio Hospital division	55
Culion leper colony division	161
Total	511

and 84 requisitions on the Bureau of Supply for items not covered by contract.

For vaccine virus, requisitions were filled to the number of 2,492, for 2,044,900 units.

Number of units of virus on hand July 1, 1911.....	14,400
Received during the year.....	2,066,000
Total	2,080,400
Issued during the year	2,044,900
Remaining on hand June 30, 1912.....	35,500

Inter-Bureau vouchers received from the following sources:

Bureau of Supply	553
Bureau of Public Works	4
Bureau of Prisons	13
Bureau of Constabulary	1
Bureau of Education	1
Department of sanitation and transportation	3
Open market	101
Total	676

During the year, 235 shipments were made by boat and 114 by rail requiring 349 bills of lading.

Simple remedy packages Nos. 1, 2 and 3 were prepared by the division and issued as follows:

	1	2	3
On hand June 30, 1911	32	47	2
Manufactured during the year	145	128	27
Total	177	175	29
Issued during the year	173	161	23
Remaining on hand June 30, 1912	4	14	6

Total number issued during the year, 357.

DIVISION OF SANITARY ENGINEERING.

The year was quiet and not marred by epidemics, thus enabling the sanitary engineer to devote his time to the study of means for the improvement of sanitary conditions throughout the Islands.

MANILA.

Consolidation of sanitary work.—On August 1, 1911, the sanitary engineer of the Bureau assumed the duties of sanitary engineer in the department of engineering and public works of the city of Manila in addition to duties as sanitary engineer of the Bureau of Health. The office of the inspector of plumbing was then transferred and moved from the City Hall to the Santa Potenciana Building. The result is to put the plumbing work of Manila immediately under the direction of the Sanitary Engineer for the Bureau of Health. The Bureau of Health previously exercised considerable control over the plumbing work, as plumbing certificates were not issued without being countersigned by the sanitary engineer. When unsatisfactory work was encountered, however, due to different standards of inspection of the two offices, the correction of such matters was slow and often involved much correspondence and many explanations.

Under the present system, the inspectors of plumbing are in daily and constant touch with the sanitary engineer of the Bureau of Health and any difficulties encountered are immediately known and adjusted.

The master plumbers are now able to transact all their work in one office and one clearly defined policy is pursued throughout the prosecution of any work

The sanitary sewer, Manila.—Work on the connection of private premises with the sanitary sewer is progressing as the tabulated report attached shows.

Sewer connections.

Total number to be made	5,856
Total number made during the three years the sewer has been in operation	2,574
Total number made during the last fiscal year	950
Percentage of premises connected	44.0
Percentage of premises not connected	56.0

The above is in spite of the fact that the validity of Ordinance No. 125, enacted for the purpose of forcing owners to connect their premises to the sanitary sewer is still being contested in the courts.

The principal case is now before the Supreme Court for the final decision. In other words, the large percentage of premises connected during the last three years indicates a healthy appreciation upon the part of house owners in Manila of the benefits accruing from the use of the new sewer system.

Public convenience stations.—Additional public convenience stations were placed in operation during the year as follows:

No.	Location.	Pails.	Date.
175	2315 Anloague, Tondo	14	July 31, 1911
176	Pier No. 3, Calle Ermita	(*)	Aug. 15, 1911
177	1004 Calle Dagupan, Tondo	16	Aug. 23, 1911
178	Paco station, Calle Herran	8	Dec. 20, 1911
179	Singalong station, Calle Vito Cruz	7	Nov. 21, 1911
180	35 Calle Habana, Santa Ana, back of	5	Nov. 24, 1911
181	297 Gonzalez Tuason, Sampaloc, opposite	9	Dec. 13, 1911
182	355 Gonzalez Tuason, Sampaloc, opposite	9	Dec. 16, 1911
183	Muelle de la Industria, Binondo	7	Mar. 5, 1912
184	1238 Calle Agno, Malate	9	Mar. 9, 1912
185	Paco Market, Paco	8	Apr. 17, 1912
186	208 Calle Trabajo, Sampaloc	7	May 11, 1912
187	Corner Trabajo and Santa Mesa, Sampaloc	8	June 2, 1912
188	312 Sulucan, Sampaloc	8	May 6, 1912

* Flush closet.

Public closets transferred, fiscal year 1912.—No. 5, rear of Divisoria Market to Pier No. 5, flush closets; No. 36, rear of Quinta Market to south side of same, flush closets.

Public closets discontinued, fiscal year 1912.—No. 34, Herran Market, April 30.

The above localities are generally in the native quarters of the city; also contiguous to certain congested native commercial districts, for the use of stevedores, laborers, patrons of public markets, etc.

Culion.—Frequent trips were made to Culion in connection with engineering projects. A complete contour map of the town of Culion, including

Balala and vicinity, was completed during the month of March. This also included a partial survey of the island.

The survey covered an area of 7 square kilometers and cost, including salaries ₱812 or ₱116 per square kilometer. The highest mountain encountered in the survey was Mount Chinankin, distant 3.6 kilometers from Culion village.

Iloilo.—Iloilo was visited August 12 to August 16, 1911, with a view to investigating existing conditions, recommending for enactment a sanitary code, and other matters. The special report deals with the necessity for enacting this legislation, and calls attention as well to the necessity of a more concentrated form of government than that now in force. A town council of eighteen members, serving without compensation, many of them living in distant villages, is not conducive to a realization by the members of the modern needs of a municipality growing as fast and with as much commerce as Iloilo. The town should be incorporated and a commission form of government is recommended.

Cebu.—Cebu, similar to Iloilo, lacks adequate drainage facilities. The Osmeña waterworks system now nearing completion will, when in operation, discharge large quantities of water into what are at present undrained back yards and undrained streets. It is needless to say that a sewer system, although expensive, would be of vast benefit to the town. A rough estimate of the cost of such a sewer system, including one pumping station, has been unofficially placed by the Bureau of Public Works district engineer at ₱200,000. It is possible that this estimate may be reduced. It is recommended that investigations be made with a view to building a combined storm and sanitary sewer without a pumping station to discharge into deep water at the mouth of the Guadalupe River.

Pending the construction of a sewer system, work on a systematic guttering of all existing streets should be arranged for and such drainage placed in operation. This will always be a necessary sanitary adjunct to the municipality whether sewers are built or not. These gutters should be sufficiently deep to drain not only the street areas but also the surrounding ground, when such ground is capable of being drained.

Esteros: The esteros or salt-water estuaries of Cebu are now a menace to the public health of the community and should be walled.

Cavite.—Cavite was inspected April 10, 1912, at the request of Doctor Peck, of the Navy, and the district health officer, of Cavite, and an estimate was prepared for a small sewer system intended to rectify the present unsatisfactory conditions.

This estimate was forwarded to the Executive Secretary who returned it on May 3d with the information that the municipality of Cavite was not in a position to finance such an undertaking and had already exhausted its credit with the Insular Government.

Baguio.—*Sewer system:* April 18 to 25, inclusive, was spent in Baguio in compliance with orders issued by the Director of Health at the request of Mr. C. W. Hubbell, chief engineer of the Bureau of Public Works, for the investigation of the best means available for the disposal of sewage in Baguio. A joint report of this matter is now in preparation. During the course of the investigation, which was made in a very thorough manner, it developed that probably the only satisfactory method to be pursued would be the construction of a complete system of sewers for the city; the sewage to discharge into treating basins in the vicinity of

Trinidad, and from there the effluent could probably be discharged into the Naguilan River.

Course of instruction in structural sanitation.—A course of instruction was commenced on May 27, 1912, for the purpose of drilling inspectors and other employees on the public health, building and plumbing ordinances of Manila. By special order of the Director of Health, dated June 1, 1912, all sanitary inspectors of the Bureau of Health are now required to be present. The hour is from 7.30 to 8 every morning except Sundays and holidays.

SAN LAZARO HOSPITALS DIVISION.

The total number of patients in this division for the year was 3,130. Of these, 1,684 were comprised in the insane, leper, and tuberculosis departments, the remainder being acute contagious diseases such as measles, varioloid, diphtheria, etc.

The report of this division for the past year is especially gratifying on account of the fact that not a single case of cholera was admitted.

One woman, found dead, was reported positive by the Bureau of Science. There were 7 contacts of this case, and all were found to be cholera carriers. None of them developed any symptoms of the disease.

In the insane department the diseases encountered were acute and chronic mania, melancholia, primary, terminal, paretic and senile dementias, acute and chronic alcoholism, paranoia, epileptic and hysteric insanity, idiocy and a few other minor forms of mental disorder. The chronic insanities and dementias are the predominating diseases. The insane do considerable manual labor in the hospital and on the grounds. The women sew, make bandages, and perform similar tasks.

In the leper department a number of cases have become negative for leprosy under treatment with chaulmoogra oil. A room for men and one for women have been arranged for the isolation of cured or markedly improved cases.

During the year the steam laundry has done very satisfactory work. This is a complete plant, including disinfecting chamber, washers, wringer, mangle, starcher, drying room, etc., and also baths where many laborers for the Hawaiian sugar plantations, and emigrants for the United States are disinfected.

The two-story reinforced-concrete double building, including a house for the chief of the division and quarters for nurses, has been completed, and is a very satisfactory residence. This building adds more to the appearance of the grounds than any structure as yet erected here.

The site has been selected, and arrangements made for erecting another reinforced-concrete ward, similar to the one finished last year, which has been shown by use to be properly arranged. The wooden contagious wards have been painted, inside and out.

A plant for the manufacture of disinfectants for general use in the Bureau has been installed.

The roads have been completely surfaced with shell sand, and the court in front of the leper department is being filled with the same material, and portions recemented.

The usual work of setting out new shrubs, plants and trees, and improving the grounds has been carried on. The gardens have been very successful.

STATISTICAL DIVISION.

The division keeps the register of births, marriages and deaths in the city of Manila, and issues permits for interments, removal of dead bodies in and out of the Islands, exhumations, extensions of time for the lease of niches in Paco cemetery, and transcripts of birth and death records, and superintends admissions to the Hospicio de San José. It is also in charge of compiling the vital statistics for the city of Manila from the returns which are received, the number and comprehensiveness of which have been increasing continuously, furnishing reliable information concerning marriages, births and deaths, and also the morbidity for the most important epidemic diseases.

The tables consolidated from provincial form No. 46 are more complete than those that have been published heretofore, and include all the provinces under the civil régime with the exception of Sorsogon and Mindoro. They affect a population of approximately 6,286,339, with 179,804 deaths during the year, or a death rate of 28.60 per thousand as against 288,565 births, or a birth rate of 45.90 per thousand for the same period. Other general tables furnish information regarding the insane, the blind and the infirm. Statistics of systematic and nonsystematic vaccinations performed in the provinces and the amount of vaccine virus sent, form additional information regarding the vital statistics and prophylactic work done in the provinces. It will soon be possible to furnish statistics concerning marriages, as the necessary forms for that purpose have already been distributed.

BOARD OF MEDICAL EXAMINERS.

The Board of Medical Examiners consists of Dr. A. P. Goff, president; Dr. Miguel A. Velarde, member; and Dr. Claude E. Norris, secretary treasurer. Dr. Isidoro de Santos has resigned.

The Board held the usual examinations during the year, and met from time to time as necessary.

Registrations were made as follows:

Doctors of medicine	24
Licentiates of medicine	41
Cirujanos ministrantes	9
Midwives	0
Total	74

The following table shows the amount deposited in the treasury:

Doctors of medicine, 24, at ₱30	₱720
Licentiates of medicine, 41, at ₱30	1,230
Cirujanos ministrantes, 9, at ₱10	90
Total	2,040

The expenditures were as follows:

Examination fees to Dr. Santos at rate specified in Act 310	₱120
Examination fee to Dr. Velarde at rate specified in Act 310	203
Total	323

BOARD OF PHARMACEUTICAL EXAMINERS.

The Board has held two examinations, the first on July 5, 1911, at which there were 20 applicants, and the second on January 2, 1912, at which 14 applicants were present, making in all 34 applicants for the year. Of this number 2 only obtained the required average and were issued certificates. There were issued during the year 56 apprentice certificates and 3 temporary certificates without examination.

There was collected during the year from all sources	
the sum of	₱1,652
The treasurer's receipts were	1,652
The disbursements were:	
Salary, secretary-treasurer	300
Fees for 2 members for 34 applicants examined, at	
₱4 each	272
Total	572

LEGAL REQUIREMENTS FOR THE PRACTICE OF MEDICINE IN THE PHILIPPINE ISLANDS.

Act 310, regulating the practice of medicine and surgery in the Philippine Islands, enacted December 4, 1901, provides in effect that every person desiring to begin the practice of medicine and surgery within the jurisdiction of the law shall apply to the Board of Medical Examiners for a certificate of registration and such applicant shall submit to an examination in anatomy, physiology, chemistry, materia medica and therapeutics, pathology and bacteriology, hygiene, surgery, practice of medicine, obstetrics, diseases of women and children, diseases of the nervous system, diseases of the eye and ear, medical jurisprudence, and shall present a diploma from a medical school or college recognized as reputable by the Director of Health. These examinations may be oral or written, or both, and in case an applicant shall fail to pass a satisfactory examination, he shall not be permitted again to present himself for examination until a period of six months has elapsed.

The Board of Medical Examiners is required by law to meet in the city of Manila for the purpose of examining candidates desiring to practice medicine in the Philippine Islands on the second Tuesday of January, April, July, and October of each year.

Special examinations are frequently held to accommodate physicians who are going to the provinces or who would otherwise be inconvenienced by waiting for the regular examinations. No temporary certificates are issued.

The fee for examination as a physician, either licentiate or

doctor of medicine, is \$15 (₱30), and the certificates issued by the Board must bear an internal-revenue stamp of \$0.10 (₱0.20), thus making the total cost of the certificate \$15.10 (₱30.20). The financial transaction does not end here. Every person holding a certificate of registration from the Board of Medical Examiners shall have it recorded in the office of the registrar of deeds in the province or provinces within which he may desire to practice or in the city of Manila, as the case may be, before engaging in the practice of medicine, surgery, or midwifery, and until such certificate is so recorded, the holder thereof shall not exercise any of the privileges to practice medicine conferred therein. The fee for recording a certificate is \$1.50 (₱3) for each province in which it is registered, the fee, however, is paid but once in the same province.

After a doctor has successfully passed his examination and recorded his certificate with the registrar of deeds, he must next pay an industrial tax of \$25 (₱50). This tax is collected every year but may be paid in quarterly installments. After all of this has been done, the physician may open an office.

The Board of Medical Examiners issues four kinds of certificates, one for persons holding the degree of doctor of medicine, another for persons holding the degree of licentiate of medicine, a third for cirujanos ministrantes, and a fourth for midwives.

The examination is the same for doctors and licentiates of medicine and the privileges conferred by the certificates are identical, except as to eligibility for appointment on the Board of Medical Examiners, as only doctors of medicine can serve in this capacity.

A cirujano ministrante is a person who has studied medicine in the Santo Tomas University of Manila for not less than two years and received therefrom the degree of cirujano ministrante.

A cirujano ministrante and an undergraduate of medicine are one and the same thing within the meaning of the law. In the larger municipalities, cirujanos ministrantes usually assist physicians by administering medicine, taking the temperature and pulse, and noting any condition or change that should be brought to the attention of the medical attendant. They are the personal representatives of the physicians and remain with the patients as attendants, there being two or more employed for each case according to the financial condition of the patient.

In the remote municipalities where there are no civilian physicians, cirujanos ministrantes, better known as practican-tes, are sometimes licensed by district health officers to practice

medicine after passing a "satisfactory examination" and paying the required fee of ₱10 to the provincial treasurer.

The Santo Tomas University degree of C. M. is the only C. M. degree recognized by the Medical Act. The college of Medicine and Surgery of the University of the Philippines to undergraduate students, grants only the degree of M. D. and its students are registered without examination, under an Act of the Commission but in all other respects, they are required to comply with the provisions of Act No. 310. All others must be examined since the medical law does not provide for reciprocity.

The law contemplates that no person shall practice midwifery in the Philippine Islands without first having passed a satisfactory examination before the Board of Medical Examiners and being granted a certificate of registration. This is the only registration permitted to the nonholders of a medical degree. There are many illegal practitioners of midwifery, especially in the provinces, and it is practically impossible to remedy the evil under the present conditions. It is a question of licensing a great number of incompetent people or creating an obstetric monopoly since those who can pass an examination of the simplest character are exceedingly few.

The character of medical examinations in the Philippine Islands will compare favorably with state board examinations of the United States. No literary educational test is required by Act No. 310, regulating the practice of medicine and surgery, either as preliminary to the study of medicine or in the examinations for admission to practice. Such tests are not necessary for the graduates of the Manila medical schools as practically all of them hold the degree of bachelor of arts or have had special preparation.

Medical officers of the United States Army, the United States Navy, and the United States Public Health and Marine-Hospital Service are exempt from the operations of the Medical Law in so far as examinations are concerned.

BOARD OF DENTAL EXAMINERS.

Examinations were held in July and December, 1911, as prescribed by Act 593 and fourteen candidates were examined. Six were examined in July for undergraduate certificates but only one made the necessary proficiency required by the Board.

In December there were eight candidates examined, seven for undergraduate's certificate and one for certificate of registra-

tion as a graduate dentist. Five of the seven were those who had failed to make the necessary proficiency in the July examination.

The board took favorable action on these eight candidates and issued them their respective certificates.

The sum of one hundred and fifty pesos was collected and paid into the Treasury of the Philippine Islands, as follows:

13 undergraduates, at ₱10.....	₱130
1 graduate at ₱20.....	20
Total	150

FINANCES.

The Bureau of Health, at the beginning of the fiscal year, had funds available to the amount of ₱1,593,352.22, of which ₱50,342.45 and ₱126,009.77 were carried from last appropriation for accounts payable and contingent obligations, and ₱1,417,000 was Bureau of Health allotment for fiscal year 1912. The income of the Bureau of Health for the year is approximately ₱260,000, giving an available total of approximately ₱1,853,352.22.

The expenditures during the year are ₱1,656,267.48 with the liabilities of approximately ₱190,000.

A complete financial statement will be found in the appendix.

RECOMMENDATIONS.

1. Legislative authority to abate nuisances on private property, and to make the cost thereof a lien against the property.

2. Restoration of the privilege to purchase medical and surgical supplies in the open market. Under the present system prompt relief for the sick is often unnecessarily delayed, which is a responsibility which should not have to be assumed.

3. The construction of additional provincial hospitals, especially in remote sections like the Cagayan Valley, the east coast of Luzon and other places.

4. An adequate appropriation to continue the construction work at the Culion leper colony.

5. A tax upon polished rice in order to discourage its consumption. The accomplishment of this object would probably result in five thousand deaths less annually.

Respectfully submitted.

VICTOR G. HEISER,
*Passed Assistant Surgeon,
 U. S. Public Health and Marine-Hospital Service,
 Director of Health.*

The Honorable the SECRETARY OF THE INTERIOR,
Manila, P. I.

STATISTICAL TABLES—BUREAU OF HEALTH

JULY 1, 1911 TO JUNE 30, 1912.



GENERAL STATISTICS.

[Unless otherwise stated, these statistics are for the fiscal year ended June 30, 1912.]

POPULATION OF THE CITY OF MANILA.

[Health census of 1910.]

Nationalities.	Popula- tion.	Nationalities.	Popula- tion.
Americans	4,174	Chinese	14,093
Filipinos	211,859	All others	1,275
Spaniards	2,364		
Other Europeans	644	Total	234,409

MARRIAGES.*

	Nationalities.						Total.
	Amer- icans.	Filipi- nos.	Span- iards.	Other Euro- peans.	Chi- nese.	All others.	
Total marriages	81	1,974		13	70	2	2,140
Health districts:							
No. 1	48	200		6	2		256
No. 2	8	917		3	48	1	977
No. 4	5	194				1	200
No. 5	17	599		3	19		638
No. 6	3	64		1	1		69
Single males married—							
Single females	72	1,618		10	50	2	1,752
Widowed females	4	132		8	6		145
Divorced females	2						2
Widowed males married—							
Single females		130			13		143
Widowed females	2	94			1		97
Divorced females							
Divorced males married—							
Single females							
Widowed females	1						1
Divorced females							
Nationality of brides:							
Americans	48			1			49
Filipinos	25	1,973		6	67	2	2,073
Spaniards		1					1
Other Europeans	8			6			14
Chinese					2		2
All others					1		1
Relationship:							
Blood		7					7
Affinity							

* Registration incomplete.

Average per thousand population, 18.25.

MARRIAGES BY AGE.*

Males.		Females.						
Ages.	Num-ber.	To 14 years.	To 20 years.	To 25 years.	To 30 years.	To 40 years.	To 50 years.	Over 50 years.
To 14 years								
To 20 years	648	1	565	70	9	3		
To 25 years	850	2	568	234	33	13		
To 30 years	302		142	99	49	11		
To 40 years	280		84	64	55	50	1	
To 50 years	50		6	12	8	18	4	1
Over 50 years	30		3	1	3	10	8	2
Total	2, 140	3	1, 368	480	157	105	19	8

* Registration incomplete.

BIRTHS REPORTED.*

Nationalities.	Male.	Female.	Total.	Annual average per 1,000.
Americans	66	70	136	32.58
Filipinos	4,801	4,306	9,107	42.88
Spaniards	19	16	35	14.80
Other Europeans	15	12	27	41.92
Chinese	17	12	29	2.05
All others	5	1	6	4.70
Total and average	4,923	4,117	9,340	39.84

* Registration incomplete.

BIRTHS, BY DISTRICTS.

Health districts.	Number of legitimates.			Number of illegitimates.			Grand total.
	Male.	Female.	Total.	Male.	Female.	Total.	
No. 1, Intramuros	585	562	1,147	32	30	62	1,209
No. 2, Meisic	1,084	937	2,021	66	64	130	2,151
No. 4, Sampaloc	887	820	1,707	91	76	167	1,874
No. 5, Tondo	1,503	1,300	2,803	92	87	179	2,982
No. 6, Paco	563	521	1,084	20	20	40	1,124
Total	4,622	4,140	8,762	301	277	578	9,340

BIRTHS, BY DISTRICTS, AND ANNUAL BIRTHRATE PER 1,000.

Health districts.	Popula-tion.	Deaths.	Annual rate per 1,000
No. 1, Intramuros	29,744	1,209	40.64
No. 2, Meisic	82,771	2,151	25.98
No. 4, Sampaloc	37,697	1,874	49.71
No. 5, Tondo	62,354	2,982	47.82
No. 6, Paco	21,843	1,124	51.45
Total and average	234,409	9,340	39.84

BIRTHS, BY DISTRICTS, ACCORDING TO NUMBER OF CHILDREN BORNE BY MOTHER.

Number of births, in the order in which the child was born, whether first child, second child, etc.	Health districts.										Total.	
	No. 1.		No. 2.		No. 4.		No. 5.		No. 6.			
	Liv- ing.	Still born.	Liv- ing.	Still born.	Liv- ing.	Still born.	Liv- ing.	Still born.	Liv- ing.	Still born.	Liv- ing.	Still born.
First	335	17	574	16	374	10	678	28	227	10	2,188	81
Second	196	8	428	10	358	12	522	15	196	2	1,700	47
Third	202	10	335	23	289	3	455	8	189	3	1,470	47
Fourth	133	11	244	8	262	1	358	12	142	2	1,139	34
Fifth	98	9	181	2	199	9	278	8	124	3	880	31
Sixth	70	9	121	4	129	1	233	7	74	6	627	27
Seventh	61	2	87	8	91	7	137	4	64	1	440	22
Eighth	89	2	65	4	60	1	126	2	33	2	323	11
Ninth	21	5	46	1	36	6	62	4	28		193	15
Tenth	22	3	24		27	1	47	5	9	3	129	12
Eleventh	13	3	18		17	1	30	4	14		92	8
Twelfth	11		13	2	14		28	1	15		81	3
Thirteenth	2	1	4		11		15	2	4		36	3
Fourteenth	4		6	2	2		7		2		21	2
Fifteenth	1		4		1		4		1		11	
Sixteenth			1		3		2				6	
Seventeenth	1								1	1	2	1
Eighteenth									1		1	
Twenty-first					1				1		1	
Total	1,209	80	2,151	80	1,874	51	2,982	100	1,124	33	9,340	344

NUMBER OF DEATHS AND DEATH RATE PER 1,000 AMONG RESIDENTS, BY NATIONALITIES.

Nationalities.	Number of deaths.	Annual average per 1,000.	Nationalities.	Number of deaths.	Annual average per 1,000.
Americans	69	16.53	Chinese	276	19.58
Filipinos	8,215	38.77	All others	15	11.76
Spaniards	40	16.92			
Other Europeans	18	27.95	Total and average	8,633	36.82

A CLASSIFIED REPORT OF ALL DEATHS OCCURRING IN MANILA, INCLUDING TRANSIENTS.

	Married.	Divorced.	Wid- owed.	Single.	Children.	Condition not stated.	Total.
Males			322	547	3,228	61	5,159
Females	1,001	709	550	184	2,662	21	4,126
Grand total							9,285
Stillbirths							347
Deaths:							
With medical attendance							5,886
Without medical attendance							3,889

DEATHS, BY AGES.

	Resi- dents.	Tran- sients.	Total.		Resi- dents.	Tran- sients.	Total.
Under 30 days	919	15	934	40 years to 50 years	488	70	558
30 days to 1 year	2,987	124	3,061	50 years to 60 years	366	39	405
1 year to 2 years	739	48	787	60 years to 70 years	319	35	354
2 years to 5 years	757	33	790	70 years to 80 years	230	15	245
5 years to 10 years	235	15	250	80 years to 90 years	198	6	204
10 years to 15 years	77	6	83	90 years to 100 years	97	2	99
15 years to 20 years	152	18	170	Over 100 years	50		50
20 years to 25 years	225	46	271	Unknown	16	7	23
25 years to 30 years	280	63	343				
30 years to 40 years	548	110	658	Total	8,633	652	9,285

DEATHS, BY DISTRICTS, INCLUDING TRANSIENTS.

Health districts.	Popula- tion.	Deaths.	Annual rate per 1,000.
No. 1, Intramuros	29,744	1,306	43.90
No. 2, Meisic	82,771	2,274	27.47
No. 4, Sampaloc	37,697	1,435	38.06
No. 5, Tondo	62,354	3,480	55.81
No. 6, Paco	21,843	790	36.16
Total and average	234,409	9,285	39.61

COMPARATIVE MORTALITY FROM JANUARY, 1901, TO JUNE, 1912, INCLUSIVE.

Years.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Total.	
	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.	Deaths.	Annual death rate per 1,000.
1901	753	26.25	760	26.72	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1902	760	26.58	766	26.87	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1903	692	23.98	706	24.37	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1904	796	27.64	709	24.09	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1905	686	23.69	608	20.86	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1906	737	25.48	596	20.36	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1907	682	23.31	473	16.27	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1908	1,117	38.87	733	25.41	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1909	720	24.64	616	21.35	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1910	729	25.64	638	22.50	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1911	653	22.82	536	18.29	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30
1912	698	24.09	611	21.32	885	30.47	903	31.47	621	20.89	608	20.27	702	23.79	767	26.15	855	28.15	855	28.15	448	15.16	448	15.16	9,375	31.30

^a Death rate computed on population of 244,732 (Health Department's census).

^b Death rate computed on population of 219,941 (Official census, 1903).

^c Death rate computed on population of 223,542 (Health census, 1907).

^d Death rate computed on population of 234,409 (Health census, 1910).

Years.	First quarter.		Second quarter.		Third quarter.		Fourth quarter.	
	Number of deaths.	Annual death rate per 1,000.	Number of deaths.	Annual death rate per 1,000.	Number of deaths.	Annual death rate per 1,000.	Number of deaths.	Annual death rate per 1,000.
1901	2,327	38.58	2,410	39.52	2,077	33.69	2,561	41.54
1902	2,236	37.07	4,433	72.70	5,067	82.19	2,715	44.04
1903	1,652	27.39	1,911	31.34	2,710	48.91	3,085	55.68
1904	2,256	41.16	2,314	42.22	2,962	53.46	2,759	49.98
1905	1,856	34.24	1,649	30.09	2,601	46.94	2,635	47.56
1906	1,932	35.64	1,848	33.72	3,468	62.59	1,984	34.90
1907	1,569	28.48	1,280	22.98	1,936	34.38	2,502	44.43
1908	2,570	46.14	1,937	34.77	3,487	61.92	2,652	47.09
1909	1,954	35.47	1,646	29.55	2,019	35.85	2,317	41.14
1910	2,009	34.78	1,844	31.67	2,194	37.15	1,982	33.56
1911	1,764	30.52	1,849	31.65	2,449	41.47	2,166	36.68
1912	2,041	34.94	1,977	33.85				

NUMBER OF DEATHS, WITH CAUSES, OCCURRING AMONG RESIDENTS IN THE CITY OF MANILA (STILL BIRTHS NOT INCLUDED).

[illegible]

Number of deaths, with causes, occurring among residents, etc.—Continued.

Causes of death.	Amer- icans.		Filipinos.		Span- iards.		Other Euro- peans.		Chi- nese.		All others		Total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
<i>I. General diseases—Continued.</i>													
54. Anemia, chlorosis			1	3									4
55. Other general diseases			1										1
56. Alcoholism (acute or chronic)	2												2
59. Other chronic poisonings									6				6
<i>II. Diseases of the nervous system and of organs of special sense.</i>													
60. Encephalitis			2	1									3
61. Simple meningitis	3		107	78			1		1	1			191
61a. Meningitis, cerebro-spinal, epidemic			1										1
62. Locomotor ataxia			1	2					3				6
63. Other diseases of the spinal cord			1	2					1			1	5
64. Cerebral hæmorrhage, apoplexy	3		39	44	1				2				89
65. Softening of the brain			3	1					10				14
66. Paralysis without specified cause	1		8	17					4				30
67. General paralysis of the insane	1		4	2									7
68. Other forms of mental alienation			21	5					1				27
69. Epilepsy			1	2									3
70. Convulsions (nonpuerperal)			1	1									2
71. Convulsions of infants			278	242					4	4			528
74. Other diseases of the nervous system			2		1								3
75. Other diseases of the eyes and their annexa			1										1
76. Diseases of the ears				4									4
<i>III. Diseases of the circulatory system.</i>													
77. Pericarditis	1		3										4
78. Acute endocarditis			15	16									33
79. Organic diseases of the heart	4		54	46	2	1	1	1	29				138
80. Angina pectoris			5	7	1								13
81. Diseases of the arteries, atheroma, aneurysm, etc.	2		13	9	3				3				30
82. Embolism and thrombosis			1	4	1								6
83. Diseases of the veins (varices, hæmorrhoids, phlebitis, etc.)	1		1	1									3
84. Diseases of the lymphatic system (lymphangitis, etc.)			1	2									3
85. Hæmorrhage; other diseases of the circulatory system.	1		2	3									6
<i>IV. Diseases of the respiratory system.</i>													
87. Diseases of the larynx			1										1
88. Diseases of the thyroid body									1				1
89. Acute bronchitis			420	397					3	1			821
90. Chronic bronchitis	1		169	157	1	1			20	1			350
91. Broncho-pneumonia	1	1	131	98					3				234
92. Pneumonia	2		73	39					4				118
93. Pleurisy			6	6									12
94. Pulmonary congestion, pulmonary apoplexy			5	2	1			1					9
95. Gangrene of the lungs			1										1
96. Asthma			12	15	1								28
97. Pulmonary emphysema			2	2									4
98. Other diseases of the respiratory system (tuberculosis excepted)			1										1
<i>V. Diseases of the digestive system.</i>													
99. Diseases of the mouth and adnexa			2	1	1								4
101. Diseases of the esophagus				1					4				5
102. Ulcer of the stomach			4	3	1								8
103. Other diseases of the stomach (cancer excepted)				9				1					21
104. Diarrhœa and enteritis (under 2 years)	3	1	274	202				1	2	1	1		485
105. Diarrhœa and enteritis (2 years and over)		1	122	112	1				3				239
107. Intestinal parasites				8									14
108. Appendicitis and typhlitis	2		6	4									12
109. Hernias, intestinal obstructions	1		11	6		1			1				20
110. Other diseases of the intestine			4	7		1	1						13
111. Acute yellow atrophy of the liver				8					1				24
113. Cirrhosis of the liver	1		12	9	2				4				28

Number of deaths, with causes, occurring among residents, etc.—Continued.

Causes of death.	Americans.		Filipinos.		Spaniards.		Other Europeans.		Chinese.		All others.		Total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
V. Diseases of the digestive system—Ctd.													
114. Biliary calculi.....				3									3
115. Other diseases of the liver.....	1		11	7									19
117. Simple peritonitis (nonpuerperal).....			14	5	2								21
118. Other diseases of the digestive system (cancer and tuberculosis excepted).....			1										1
VI. Nonvenereal diseases of the genito-urinary system and adneza.													
119. Acute nephritis.....	1		20	29		1							51
120. Bright's disease.....	3	1	48	63	1	2		2					120
121. Chyluria.....			1										1
122. Other diseases of the kidneys and annexa.....			2	5									7
123. Calculi of the urinary passages.....			1	1									2
124. Diseases of the bladder.....			5	1									6
130. Other diseases of the uterus.....				1									1
131. Cysts and other tumors of the ovary.....				2									2
VII. The puerperal state.													
134. Accidents of pregnancy.....				1									1
135. Puerperal hæmorrhage.....				21									21
136. Other accidents of labor.....				4									4
137. Puerperal septicæmia.....				31									31
138. Puerperal albuminuria and convulsions.....				4									4
140. Following childbirth (not otherwise defined).....				2									2
VIII. Diseases of the skin and of the cellular tissue.													
142. Gangrene.....			6	2									8
143. Furuncle.....			2	2									4
144. Acute abscess.....			1	5									6
145. Other diseases of the skin and annexa.....			1	1									2
IX. Diseases of the bones and of the organs of locomotion.													
146. Diseases of the bones (tuberculosis excepted).....			3	2				2					7
X. Malformations.													
150. Congenital malformations (stillbirths not included).....			2	10									12
XI. Diseases of early infancy.													
151. Congenital debility, icterus, and sclerema.....	2	2	453	339		2	1		1	1			801
152. Other diseases peculiar to early infancy.....			12	5									17
153. Lack of care.....		1	10	10									21
XII. Old age.													
154. Senility.....			127	220	1	1			1				350
XIII. Affections caused by external causes.													
155. Suicide by poison.....	1		2										3
157. Suicide by hanging or strangulation.....									1				1
159. Suicide by firearms.....	1												1
160. Suicide by cutting or piercing instruments.....			2										2
155b. Other acute poisonings.....			4	1	1								6
166. Conflagration.....			1	1									2
167. Burns (conflagration excepted).....			9	7					1	1			18
168. Absorption of deleterious gases (conflagration excepted).....				1									1
169. Accidental drowning.....			9	2					7		1		19
170. Traumatism by firearms.....	2		1										3
171. Traumatism by cutting or piercing instruments.....			8	2					3				13
172. Traumatism by fall.....			1	1									2
174. Traumatism by machines.....			1										1

Number of deaths, with causes, occurring among residents, etc.—Continued.

Causes of death.	Americans.		Filipinos.		Spaniards.		Other Europeans.		Chinese.		All others.		Total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
<i>XIII. Affections caused by external causes—Ctd.</i>													
175. Traumatism by other crushing (vehicles, railroad, landslides, etc.)	1		8	4					1				14
181. Electricity (lightning excepted)			2										2
183. Homicide by cutting or piercing instrument			1	4					1				6
185. Fractures (cause not specified)	1		9	4					2		1		17
186. Other external violence			4	2									6
<i>XIV. Ill-defined diseases.</i>													
188. Sudden death			1										1
189. Cause of death not specified or ill-defined	1	1	26	20					3				51
Total	55	14	4,343	3,872	28	12	11	7	264	12	12	3	8,633
Grand total	69		8,215		40		18		276		15		8,633

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Causes of death.	Amer- icans.		Filipi- nos.		Span- iards.		Other Euro- peans.		Chi- nese.		All others.		Total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
I. General diseases.													
1. Typhoid fever				1	2				1			1	6
4. Malaria				6	4				1		4		15
6. Measles				5	4								9
9. Diphtheria and croup					2								2
10. Influenza				1									1
14. Dysentery	1	1		7	7					2	1		19
17. Leprosy				5	2								7
18. Erysipelas				1									1
20. Purulent infection and septichæmia					1			1		1			3
24. Tetanus				6	2			1		1			10
27. Beriberi				22	11			1					34
28. Tuberculosis of the lungs	1		115	25	1	2		8		1			153
29. Acute miliary tuberculosis				1									1
30. Tuberculous meningitis				2	1								3
31. Abdominal tuberculosis				5	1						1		7
35. Disseminated tuberculosis		1	5	1									7
37. Syphilis				1									1
39. Cancer and other malignant tumors of the buccal cavity				1	1		1						3
40. Cancer and other malignant tumors of the stomach or liver	1		1	1	1								4
41. Cancer and other malignant tumors of the peritoneum, intestines, rectum				2									2
42. Cancer and other malignant tumors of the female genital organs					4								4
44. Cancer and other malignant tumors of the skin				1									1
45. Cancer and other malignant tumors of other organs and of organs not specified				3			1						4
47. Acute articular rheumatism				1									1
49. Scurvy				1									1
51. Exophthalmic goiter					1								1
54. Anemia, chlorosis				1	1								2
II. Diseases of the nervous system and of organs of special sense.													
61. Simple meningitis	1		7	6									14
63. Other diseases of the spinal cord			2										2
64. Cerebral hæmorrhage, apoplexy	2			3									5
66. Paralysis without specified cause			2										2
68. Other forms of mental alienation			8	3									11
69. Epilepsy			1										1
71. Convulsions of infants			22	13									35
76. Diseases of the ears								1					1
III. Diseases of the circulatory system.													
78. Acute endocarditis		1					1						2
79. Organic diseases of the heart			11	6			1						18
80. Angina pectoris			1										1
81. Diseases of the arteries, atheroma, aneurysm, etc	2	1	2		1			1					7
82. Embolism and thrombosis				1									1
84. Diseases of the lymphatic system (lymphangitis, etc)				1									1
IV. Diseases of the respiratory system.													
89. Acute bronchitis			18	18							1		37
90. Chronic bronchitis			11	16				1					28
91. Broncho-pneumonia	1		2	4									7
92. Pneumonia			14	3				1					18
93. Pleurisy			2										2
94. Pulmonary congestion, pulmonary apoplexy			1										1
95. Gangrene of the lungs			3										3
98. Other diseases of the respiratory system (tuberculosis excepted)			3										3

Number of deaths, with causes, occurring among transients, etc.—Continued.

Causes of death.	Amer- icans.		Filipi- nos.		Span- iards.		Other Euro- peans.		Chi- nese.		All others.		Total.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
<i>V. Diseases of the digestive system.</i>													
100. Diseases of the pharynx				1									1
102. Ulcer of the stomach	1			1									2
103. Other diseases of the stomach (cancer excepted)				1									1
104. Diarrhea and enteritis (under 2 years)		1	12	12					1		1		27
105. Diarrhea and enteritis (2 years and over)			4	12					2		1		19
107. Intestinal parasites			1										1
108. Appendicitis and typhlitis			1						1		1		3
109. Hernias, intestinal obstructions			4								1		5
110. Other diseases of the intestine											1		1
114. Biliary calculi				1					1				2
115. Other diseases of the liver	1		2	1					1		1		6
117. Simple peritonitis (nonpuerperal)			3	2			2						5
<i>VI. Nonvenereal diseases of the genito-urinary system and adnexa.</i>													
119. Acute nephritis				4	1								5
120. Bright's disease		1		9	3								13
122. Other diseases of the kidneys and annexa				3									3
123. Calculi of the urinary passages				1									1
<i>VII. The puerperal state.</i>													
136. Other accidents of labor					1								1
137. Puerperal septicæmia					1								1
<i>VIII. Diseases of the skin and of the cellular tissue.</i>													
144. Acute abscess				2	1								3
<i>XI. Diseases of early infancy.</i>													
151. Congenital debility, icterus, and sclerema	1		1	5									7
152. Other diseases peculiar to early infancy				1									1
153. Lack of care				2	2								4
<i>XII. Old age.</i>													
154. Senility				2	4								6
<i>XIII. Affections caused by external causes.</i>													
155. Suicide by poison								1					1
161. Suicide by jumping from a high place								1					1
165b. Other acute poisonings		1	1										2
167. Burns (conflagration excepted)			2	2									4
169. Accidental drowning	1												1
171. Traumatism by cutting or piercing instruments			1			1							2
175. Traumatism by other crushing (vehicles, railroad, landslides, etc.)				1									1
183. Homicide by cutting or piercing instruments				1									1
185. Fractures (cause not specified)	1		1										2
186. Other external violence				9									9
<i>XIV. Ill-defined diseases.</i>													
189. Cause of death not specified or ill-defined				4	1				2				7
Total	15	6	378	196	3	1	9	1	25		14	5	652
Grand total	21		573		4		10		25		19		652

Number of deaths by nationality, sex, and age—Continued.

Causes of death.	Less than 1 day to 30 days.												From 30 days to 1 year.												From 1 year to 5 years.												
	Amer- icans.		Filipi- nos.		Span- iards.		Other Euro- peans.		Chi- nese.		All others.		Amer- icans.		Filipinos.		Span- iards.		Other Euro- peans.		Chi- nese.		All others.		Amer- icans.		Filipi- nos.		Span- iards.		Other Euro- peans.		Chi- nese.		All others.		
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
<i>IX. Diseases of the bones and of the organs of locomotion.</i>																																					
146. Diseases of bones (tuberculosis excepted)																																					
<i>X. Malformations.</i>																																					
150. Congenital malformations (stillbirths not included)			1	6												1	4																				
<i>XI. Diseases of early infancy.</i>																																					
151. Congenital debility, icterus and sclerema	3	2	324	241			2	1	1	1						129	102											1	1								
152. Other diseases peculiar to early infancy			11	5												1	1																				
153. Lack of care			5													6	11											1	1								
<i>XIII. Affections caused by external causes.</i>																																					
160. Suicide by cutting or piercing instruments																																					
165b. Other acute poisonings																											1										
166. Conflagration																1																					
167. Burns (conflagration excepted)																											5	3							1		
169. Accidental drowning																											2	1									
176. Traumatism by other crushing (vehicles, railroad landsides, etc.)																																					
185. Fractures (cause not specified)																											1	2									
<i>XIV. Ill-defined diseases.</i>																																					
189. Cause of death not specified or ill-defined																																					
Total	3	3	530	387			3	3	1	4			8	4	1,715	1,316			1	10	3	3	1		5	4	770	785			1	2	6	2	1		
Grand total	6		917				6		5				12		3,031				1		13		4		9		1,555				3		8		1		

[illegible]

DEATHS, BY OCCUPATIONS.

Occupation.	Number.		Occupation.	Number.	
	Males.	Females.		Males.	Females.
Professional:			Manufacturing and mechanical industry—Continued.		
Architects, artists, teachers of art, etc.	6	4	Brewers, distillers, and rectifiers	8	2
Clergymen, priests, nuns, etc.	8	—	Butchers	—	—
Engineers and surveyors	2	—	Cabinetmakers and upholsterers	—	—
Journalists	2	—	Carpenters and joiners	91	—
Lawyers	11	—	Cigar makers and tobacco workers	31	97
Musicians and teachers of music	—	—	Clock and watch repairers, jewelers etc.	14	—
Nurses and midwives	2	3	Compositors, printers, etc.	18	2
Physicians and surgeons	5	2	Coopers	—	—
Teachers (schools)	3	—	Embroiderers (gold, silk, etc.)	—	17
Others of this class	—	—	Engineers and firemen (not locomotive)	19	—
Clerical and official:			Glass blowers and glass workers	—	—
Bookkeepers, clerks, and copyists	98	1	Hat and cap makers	3	1
Bankers, brokers, and officials of companies	4	—	Iron and steel workers	—	—
Collectors, auctioneers, and agents	6	1	Leather makers	—	—
Stenographers and typewriters	2	—	Leather workers	9	—
Telegraph and telephone operators	3	—	Machinists	11	—
Others of this class	4	—	Marble and stone cutters	5	—
Mercantile and trading:			Masons (brick and stone)	18	—
Apothecaries, pharmacists, etc.	9	—	Mill and factory operatives (textiles)	—	2
Commercial travelers	—	—	Millers (flour and grist)	—	—
Merchants and dealers	81	1	Milliners	—	—
Hucksters and peddlers	3	1	Painters, glaziers, and varnishers	22	—
Shopkeepers	17	73	Plumbers, gas and steam fitters	2	—
Others of this class	3	1	Tailors, dressmakers, and seamsters	38	215
Public entertainment:			Tinners and tinware makers	3	—
Hotel and boarding-house keepers	—	—	Others of this class	40	8
Saloon keepers, liquor dealers, bartenders, and restaurant keepers	4	—	Agriculture, transportation, and other outdoor:		
Personal service, police and military:			Boatmen and canalmen	16	—
Barbers and hairdressers	19	—	Draymen, drivers, and teamsters	57	—
Janitors and sextons	22	1	Farmers, planters, and farm laborers	67	1
Policemen, watchmen, and detectives	11	—	Gardeners, florists, nurserymen, etc.	5	1
Soldiers, sailors, and marines	6	—	Livery-stable keepers and hostlers	2	—
Others of this class	6	—	Lumbermen and raftmen	—	—
Laboring and servant:			Miners and quarrymen	1	—
Laborers (not agricultural)	643	8	Sailors, pilots, fishermen, and oystermen	63	1
Launderers	19	164	Steam railroad employees	2	—
Servants	78	33	Stock raisers, herders, and drovers	1	—
Manufacturing and mechanical industry:			Others of this class	6	—
Artificial flower and paper-box makers	7	1	All other occupations	106	36
Bakers and confectioners	12	—			
Blacksmiths	3	—	Total	1,765	677
Boot, shoe, and slipper makers	—	—			
			Grand total	2,442	

Causes of death.	Mother's milk.		Wet nurse.		Other milk.		Not milk.		Mixed.		Under 30 days with- out alimentatation.		Not stated.		Total.
	Under 30 days.	From 30 days to 1 year.	Under 30 days.	From 30 days to 1 year.	Under 30 days.	From 30 days to 1 year.	Under 30 days.	From 30 days to 1 year.	Under 30 days.	From 30 days to 1 year.	Under 30 days.	From 30 days to 1 year.	Under 30 days.	From 30 days to 1 year.	
Atresia of rectum and anus, edema of brain													1		1
Atresia.		3			3	21					1		1	4	33
Acute intestinal intoxication														1	1
Acute general miliary tuberculosis.														1	1
Acute gastric dilation; hour glass stomach													1		1
Acute yellow atrophy of the liver		1													1
Acute entero-colitis following measles														1	1
Acute colitis														1	1
Acute ulcerative colitis														1	1
Acute hemorrhagic pachymeningitis														1	1
Asphyxia by suffocation, accidental		1												1	1
Asphyxia due to labor												1			1
Asphyxia (placenta previa, partial)												1			1
Abscess, multiple		1													1
Angiocholitis		1				1								1	3
Atelectasis of lungs													1		1
Accidental burns		1													1
Beriberi	33	826		2	4	67			1	14		11	5	82	1,040
Bronchitis, acute	22	354			4	120				6		85	2	85	596
Bronchitis, acute, following measles						1									2
Bronchitis and chronic enteritis						3									1
Bronchitis, capillary	2	13				1				1		1	8		28
Bronchitis and diarrhea						1									1
Broncho-pneumonia and maramus															1
Bronchitis, chronic		71				50				3			16		140
Broncho-pneumonia	1	44				15				1		3	19		83
Bright's disease						2									2
Broncho-pneumonia; infantile beri-beri														1	1
Broncho-pneumonia; acute edema of lungs														1	1
Broncho-pneumonia; from gripp						1									1
Congestion of brain-meninges; acute ulcerative colitis														1	1
Cerebral hemorrhage														1	1
Congenital atelectasis													3		3
Congenital syphilis														1	1
Congenital debility, due to prema-turity															7
Congenital heart diseased												4	3		1
Congenital debility	231	47	1		47	64	9		3	9	98	99	4		612
Congenital debility and lack of care		1													1
Congenital debility (measles)														1	1
Cellulitis, diffuse, thorax and ab-domen														1	1
Chronic intestinal inflammation (chronic enteritis)														1	1
Convulsions of traumatic origin														1	1
Convulsions of infants	78	315			12	80	1			3	1	22	27		539
Dysentery:															
Acute		4		1		9				2				3	19
Bacillary		1		1											2
Probably bacillary						1									1
Chronic						1								1	2
Dyspepsia:															
Acute														1	1
Gastro-intestinal						4				1					5
Diphtheria and broncho-pneumonia														1	1
Diarrhea and enteritis	1	6				24				1					32
Diarrhea and enteritis, chronic						3									3
Lack of development														1	1
Erysipelas	2	3								1				1	7
Edema and congestion of lungs														1	1
Enteritis:															
Acute					1	20				2			1	10	50
Chronic		16				22				1			3		30
Entero-colitis, acute															2
Entero-colitis, chronic						4									4
Endocarditis rheumatic														1	1
Following operation for hare-lip														1	1

Causes of death.	Mother's milk.		Wet nurse.		Other milk.		Not milk.		Mixed.		Under 30 days without alimentation.	Not stated.		Total.
	Under 30 days.	From 30 days to 1 year.	Under 30 days.	From 30 days to 1 year.	Under 30 days.	From 30 days to 1 year.	Under 30 days.	From 30 days to 1 year.	Under 30 days.	From 30 days to 1 year.		Under 30 days.	From 30 days to 1 year.	
Furunculosis					1									1
Fracture of skull, intracranial hemorrhage		1			2									3
Grippe														
Gastritis														
Gastro-enteritis; acute asphyxia from inhalation of vomiting												1		1
Gangrene of left eye	1						1							1
Gastro-enterorrhagia														1
Gastro-enteritis:														
Acute	7	37			1	39			3			1	18	106
Acute, and pulmonary tuberculosis														
Chronic		5				24			2			5		36
Chronic, and capillary bronchitis														
Hypoplasia of right lung; patent-foramen ovale and ductus arteriosus									1					1
Hemorrhagical dysentery		1										1		1
Hemorrhage from duodenal ulcer; meningeal edema													1	1
Hemophilia neonatorum		1												1
Hepatitis, acute													1	1
Hypostatic congestion and edema of lungs													1	1
Icterus	34	10			4	5						1	2	56
Intestinal parasites													1	1
Inanition, premature birth											1			1
Imperfect inflation of lungs; enlarged thymus												1		1
Influenza with meningitis							1							1
Inanition					1							1		1
Ileo-colitis and broncho-pneumonia												1		1
Ileo-colitis:														
Acute													1	1
Chronic		1												1
Jaundice					1									1
Lobar pneumonia; gastric ulcer												1		1
Malaria													1	1
Malnutrition		2			1	2						4	12	21
Measles; broncho-pneumonia						1								1
Marasmus	1	34			3	67			1			1	2	109
Marasmus; acute broncho-pneumonia; podencephalus													1	1
Meningitis:														
Due to otitis media									1					1
Acute		35			7							3		45
Chronic		1										1		2
Due to difficult dentition													1	1
Cerebral, simple	1	3										1		5
Simple		34		1		3			1			1		40
Simple, acute		2												2
Probably tubercular													1	1
Measles													1	1
Meningocele, occipital, congenital		1												1
Meningeal hemorrhage; pulmonary atelectasis; general jaundice													1	1
Multiple abscess of scalp												1		1
Nephritis, acute		3			2				1			1	3	10
Nephritis, chronic		1			1									4
Obstruction of intestines		3			1								1	8
Edema of brain													1	1
Patulous foramen ovale												1		1
Patent foramen ovale														1
Persistence of foramen ovale	1				1									2
Pyemia													1	1
Premature birth					1	2					5	15	1	24
Prematurity (miscarriage)											2	2		4
Prematurity (7 months)											1	1		2
Prematurity (congenital debility)					1						1			2
Pleurisy, purulent														1
Purulent infection		1				1							2	4
Pneumonia, lobular		1										1	1	3

PHILIPPINE GENERAL HOSPITAL.

[illegible]

Philippine General Hospital—Continued.

GENERAL STATISTICS.

Total number of completed cases.....	7,252
Total number of births.....	802
Total number of deaths.....	437
Total hospital days.....	110,632
Average hospital days.....	15 1/2

CLINICAL RECORD DIVISION.

Report of completed cases for the fiscal year 1912.

Classes of patients.	Medical.	Surgical.	Obste- trical.	Eye, ear, etc.	Total.
Charity adult.....	1,462	1,622	421	464	3,969
Charity children.....	475	34	0	10	519
Government free.....	415	281	28	48	772
Government pay.....	724	271	80	142	1,217
General Hospital pay.....	67	44	7	10	128
Private pay.....	326	186	30	105	647
Total.....	3,469	2,438	566	779	7,252
Grand total.....					7,252

FREE DISPENSARY DIVISION.

Total number of patients.....	25,171
Total number of visits.....	64,678
Surgical clinic:	
Minor operations.....	779
Dressings.....	16,612
Eye, ear, nose, and throat clinic:	
Minor operations.....	18
Dressings.....	24

	Medical clinic.	Surgical clinic.	Skin clinic.	Tuberculo- sis clinic.	Obstetrical cli- nic.	Eye, ear, nose, throat clinic.	Neurology clinic.	Genito-urinary clinic.	Children clinic.	Dental clinic.	Total.
Number of first visits.....	10,087	5,370	1,142	1,616	232	3,788	211	292	2,251	182	25,171
Number more than one visit.....	8,927	16,306	778	1,879	114	9,416	252	418	1,390	22	39,502
Males.....	2,751	3,341	220	0	0	1,920	78	162	0	128	34,874
Females.....	1,956	1,620	84	0	65	1,743	42	0	0	56	22,242
Children.....	0	718	67	0	0	490	0	0	907	20	7,557
Total number of patients.....	19,014	21,676	1,920	3,495	346	13,204	463	710	3,641	204	64,678
Number of Government employees.....											1,418
Grand total.....											64,673
Number of prescriptions filled.....											83,517

INFORMATION DIVISION.

(Including only information of interest to the professional side of the hospital from November, 1911, to June, 1912, inclusive.)

Ambulance calls:	
Routine.....	1,892
Emergency.....	207
Total.....	2,099
Refused admission:	
• No beds.....	543
Undesirable cases, contagious diseases, etc.....	812
Other reasons.....	851
Total.....	1,206

Philippine General Hospital—Continued.

DEPARTMENT OF EYE, EAR, NOSE AND THROAT.

Number of major operations.....	935
Number of minor operations (estimated).....	1,440
Number of major dressings.....	1,900
Number of minor dressings.....	9,614
Number of refractions of eyes (estimated).....	1,128
Number of Government patients treated.....	2,511
Number of charity patients, Caucasians.....	8,290
Total number of dressings.....	11,543
Total number of patients admitted to hospital.....	778
Total number of operations of all classes.....	2,365
Number of beds occupied during fiscal year.....	10,230

DEPARTMENT OF OBSTETRICS.

Special annual report of completed cases for the fiscal year 1912.

	Official. Charity.		Private pay.	Hospital pay.	Total.	Nationality.		
						Amer-icans.	Filipi-nos.	Others.
Abortions and miscarriages.....	10	40	1	2	53	4	47	2
Pregnancy.....	16	69	4	1	90	6	80	4
Parturient women.....	76	222	21	3	322	63	243	16
Post-partum women.....	8	83	0	0	91	3	88	0
Births.....	76	222	21	3	322	63	243	16
Living children.....	75	195	21	3	294	63	215	16
Stillborn.....	1	27	0	0	28	0	28	0
Deaths.....	6	29	0	0	35	2	33	0
Mothers.....	2	22	0	0	24	0	24	0
Infants.....	4	7	0	0	11	2	9	0

DEPARTMENT OF SURGERY.

Special annual report for the fiscal year 1912.

Months.	Operations.					Dressings.					
	Major. Minor.		Emergency.		Total.	Fl. 16.		Fl. 15.		Total.	
	Major.	Minor.	Major.	Minor.		Major.	Minor.	Major.	Minor.		
1911.											
July	41	73	no record		114						
August	41	119	no record		160	1,890	788	477	323	3,478	
September	60	141	no record		201	not classified					
October	42	119	no record		161	1,261	798	60	348	2,467	
November	44	96	no record		140	1,075	642	191	323	2,231	
December	28	189	6	25	148	1,088	807	153	521	2,569	
1912.											
January	26	87	3	26	162	1,073	719	397	588	2,777	
February	43	67	0	17	127	691	481	388	392	1,952	
March	85	45	0	45	175	715	789	307	223	2,134	
April	48	139	9	73	269	742	1,196	121	163	2,222	
May	48	57	12	62	179	645	925	60	252	1,822	
June	52	50	6	41	149	653	1,218	0	72	1,943	

Months.	Local anes-thesia.		General anes-thesia.	
	1911		1912	
	1911	1912	1911	1912
July.....	19	8	89	107
August.....	37	3	111	97
September.....	15	5	143	86
October.....	14	5	135	93
November.....	10	16	102	108
December.....	8	5	104	100
Total.....	139		1,270	

NOTE.—There were also 148 emergency dressings during March and 35 during May.

Philippine General Hospital—Continued.

ELECTRO-MEDICAL DEPARTMENT.

	Official.	Private.	Charity.	Total.	Amount.
Skiagrams:					
Extremities	93	44	136	273	P440. 00
Head	14	19	61	94	390. 00
Chest	29	14	34	77	280. 00
Abdomen or pelvis	64	22	53	139	760. 00
Total	200	99	284	583	1,870. 00
Fluoroscopic examinations of:					
Extremities and chest	9	6	14	29	30. 00
Abdomen			2	2	
Total	9	6	16	31	30. 00
X-irradiation treatments:					
Acne	96	17		113	83. 00
Carcinoma—					
Breast			28	28	
Maxilla	5	6	10	21	30. 00
Tongue			9	9	
Uterus		9		9	45. 00
Dhobie itch	7		2	9	
Ecthyma			6	6	
Eczema vesicular	12			12	
Endometritis, tuberculous	15	1	0	16	3. 00
Graves disease	50	5		55	25. 00
Lupus—					
Erythematous	4	1		5	5. 00
Vulgaris			10	10	
Mycosis, fungoides	30		4	34	
Psoriasis			12	12	
Pyorrhea, alveolaris	24			24	
Tic convulsive			4	4	
Trigeminal neuritis	8	2		10	10. 00
Ulcus rodens	9			9	
Total	260	41	85	386	209. 00
Dermo-arc light (ultra-violet rays):					
Skin lesion tubercular	0		4	4	
Climatic bubo, post operative			39	39	
Lupus, vulgaris			22	22	
Ulcus rodens	2			2	
Total	2		65	67	
High frequency treatments	509	225	346	1,080	1,125. 00
Galvano-faradic treatments	61	108	144	313	267. 50

NOTE.—Under skiagram of chest, there were 3 research cases included.

CASES TREATED.

Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.	Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.
Abortion:						Adenocarcinoma	1	1			
Accidental	2	2				Adenoids	25	25			
Acute	1	1				Adhesions	3	3			
Incomplete	4	4				Unclassified	8	7	1		
Threatened	14	14				Albuminuria	26	25	1		
Unclassified	6	5	1			Alcoholism:					
Complete	1	1				Acute	2	2			
Acne, Pustulosa, back	1	1				Chronic	3	2	1		
Acromegaly	1	1				Amebiasis:					
Addison's disease	1	1				Intestines	182	176	2	4	
Adenitis:						Liver	4	3	1		
Inguinal	2	2				Amputation:					
Lymphatic	1	1				Traumatic—					
Suppurative, neck	1	1				Arm	1	1			
Tuberculosis, cervix	1	1				Hand	1	1			

Philippine General Hospital—Continued.

CASES TREATED—Continued.

Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.	Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.
Anemia:						Chancroids	1	1			
Acute	1		1			Multiple	6	6			
Brain, acute	2	2				Penis	2	2			
Chronic	1		1			Cholangitis:					
Secondary	26	19	7			Acute	5	3	2		
Splenic, infantile	2	2				Catarrhal	1	1			
Intestinal	1	1				Cholecystitis	6	6			
Unclassified	1	1				Acute	1	1			
Primary	1	1				Chronic	4	3	1		
Aneurysm:						Cholelithiasis	2	2			
Aorta, abdominal	1	1				Cholera infantum	1	1			
Syphilitic	1	1				Circomoniassias	1	1			
Ankylostomiasis	209	200	6	3		Cirrhois, liver	2	1	1		
Anteversion, uterus	1	1				Biliary	1	1			
Anus, atresia	1		1			Portal	1		1		
Appendicitis:						Colic, kidney	1		1		
Acute	14	12	1		1	Colitis:					
Suppurative	3	3				Acute	10	8	2		
Chronic	37	37				Bacillary	21	17	4		
Obliterative	1		1			Unclassified	6	6			
Suppurative	3	2	1			Chronic	6	6			
Arterio-sclerosis	14	11	3			Amebic	2	1	1		
Arthritis:						Undetermined	3	3			
Acute, traumatic	1	1				Unclassified	2	2			
Chronic	1	1				Concussion:					
Gonorrheal	1	1				Brain	2	1			1
Unclassified	1	1				Cornea	1	1			
Ascariasis	448	436	6	5	1	Congestion:					
Ascites	2	2				Lungs	15	3	12		
Asthma, bronchial	5	4	1			Passive, liver	1	1			
Atrophy:						Liver	2	1	1		
Corti's membrane	1	1				Conjunctivitis, phlyctenular					
Liver	1	1				Acute	1	1			
Optic nerve	2	2				Chronic	5	5			
Muscles, hand	1	1				Follicular	2	2			
Auto-intoxication, gastro-intestinal	1	1				Unclassified	2	2			
Bacteremia	1	1				Unclassified	1	1			
Balanitis, acute, infantile	8	8				Constipation:					
Balantidiasis	2	1	1			Chronic	10	10			
Banti's disease	1		1			Unclassified	4	4			
Beriberi, acute	9	8	1			Contusions	6	5	1		
Blepharitis	1	1				Coryza	2	2			
Blindness						Cyst-adenoma, ovarian	1	1			
Unclassified	1	1				Cyst:					
Bronchitis:						Intralgamentous	1	1			
Acute	56	51	2	2	1	Ovarian	16	15	1		
Chronic	6	6				Dermoid	1	1			
Subacute	1	1				Pancreas	1	1			
Buphthalmos	1	1				Superior maxilla	1	1			
Burns	13	13				Spermatic cord	2	2			
Calculus:						Cryptorchidism	1	1			
Vesical	5	4	1			Cystitis:					
Urethra	1	1				Acute	8	7	1		
Carbuncle:						Unclassified	1	1			
Neck	3	2	1			Chronic	11	9	2		
Simple	1	1				Cystocele	1	1			
Back	1	1				Cystoma, breast	1	1			
Caries tooth	2	2				Dacryocystitis	1	1			
Septicemia	1		1			Acute	2	2			
Capsule, humeral, loose	1	1				Chronic	1	1			
Cataract	23	23				Deafness	1	1			
Cervicitis, chronic	1	1				Debility, senile	1	1			
Celiulitis, abdomen	1	1				Deformity:					
Acute—						Acquired	1	1			
Scrotum	1	1				Ankylosis	3	3			
Submaxilla, neck and chest	1		1			Dementia, paralytica	1	1			
Diffuse	1		1			Dermatitis	4	4			
Left hand and forearm	2	1	1			Diabetes	2	2			
Neck	1	1				Diarrhea, acute, unclassified	4	4			
Acute	1	1				Dilatation:					
						Gastric, acute	11	2	9		
						Heart, acute	6	3	3		

Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.	Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.
Dislocation	2	2				Fistula:					
Radius	1	1				Anus	8	8			
Rib	1	1				Complete	2	2			
Distention, bladder	1	1				Intestine	1	1			
Dystrophy, muscular	1	1				Recto-vaginal	1	1			
Eczymosis	2	2				Vesico-vaginal	1	1			
Eczema:						Foreign bodies	2	2			
Chronic	2	2				Especial sense organ	1	1			
Rubrum	1	1				Fracture, clavicle	1	1			
Scorborreicum	1	1				Coccyx	1	1			
Unclassified	1	1				Fingers and hands	1	1			
Pustular, head	1	1				Colle's	1	1			
Edema:						Comminuted	2	2			
Arm	1	1				Clavicle, hand	2	2			
Epiglottitis			1			Compound	15	15			
Prepuce	1	1				Multiple	1		1		
Lungs	16	15				Compound, skull	1	1			
Acute	2	2				Neck	2	1	1		
Scrotum	1	1				Ribs	8	2	1		
Spermatic cord	1	1				Semilunar cartilage	1	1			
Embolism	1		1			Simple	2	2			
Empyema:						Ulna, radius	2	2			
Ethmoid cells	2	2				Tibia	1	1			
Lung	2	1	1			Skull	3	2	1		
Pleural cavity	2	2				Ulna	4	4			
Sphenoid cavity	3	3				Unclassified	8	8			
Sinus	1	1				Furunculosis	1	1			
Emphysema, lungs	2	1	1			Gangrene:					
Endocarditis, puerperal	1	1				Foot	1		1		
Acute	7	6	1			Hand	1	1			
Chronic	11	11				Leg	1	1			
Streptococcic	1	1				Gastritis:					
Endocervicitis, chronic	2	2				Acute	28	27		1	
Endometritis:						Chronic	12	12			
Acute	1	1				Gastro-enteritis, acute	18	16	2		
Chronic	13	13				Cholema	1	1			
Endothelioma:						Chronic	2	1	1		
Foot	1	1				Mild	1	1			
Neck	1	1				Unclassified	1		1		
Enteritis, acute	8	3				Chronic, tuberculous	1	1			
Enterocolitis, acute	1		1			Gingivitis, chronic	1	1			
Epithelioma:						Glaucoma	1	1			
Ear	1	1				Glossitis, chronic	1	1			
Penis	1	1				Goitre:					
Enteritis, acute	1	1				Cyst	1	1			
Epididymitis:						Exophthalmic	2		1		
Acute	3	3				Simple	7	7			
Chronic, unclassified	1	1				Unclassified	1	1			
Gonorrhoeal	1	1				Gonorrhoea:					
Subacute	1	1				Chronic	1	1			
Unclassified	2	2				Epididymis	1	1			
Chronic	6	6				Testis	1	1			
Epilepsy:						Unclassified	3	3			
"Grand mal"	2	2				Granuloma, chronic, foot	1	1			
Hysteria	8	3				Haemangioma	1	1			
Epistaxis	1	1				Hare-lip	2	2			
Erysipelas						Hematocoele, tunica vaginalis	1	1			
Suspected	1		1			Hematoma	1	1			
Erythema, multiform	1	1				Chest	1	1			
Fever:						Scrotum, peritoneum	1	1			
Paratyphoid	4	4				Hemiplegia	3	1	1	1	
Constipation	1	1				Hemorrhage:					
Dengue	55	55				Traumatic	1		1		
Glandular	1			1		Brain	1	1			
Puerperal	1	1				Cerebral	5	3	2		
Rheumatic	11	11				Toxic	1		1		
Acute	6	6				Internal	2		2		
Typhoid	19	16	8			Lungs	4	8	1		
Unclassified	16	16				Post-partum	5	4	1		
Undetermined	8	3				Rupture, extopic pregnancy	1	1			
Fibro-adenoma	1	1				Traumatic, vesical	1	1			
Fibrosarcoma	1	1				Urethra	1	1			
Fibroid uterus	1	1									
Fibroma, multiple	1		1								
Fissure, ano	2	2									

Philippine General Hospital—Continued.

CASES TREATED—Continued.

Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.	Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.
Hemorrhoids:						Lumbago.	1	1			
Chronic.	1	1				Little's disease.	1	1			
External.	4	4				Lymph nodes, inguinal.	1	1			
Internal.	2	2				Lymphangitis.	1	1			
Unclassified.	5	5				Lymphadenitis:					
Hernia:						Acute—chancroidal.	1	1			
Congenital.	15	14	1			Inguinal.	2	2			
Incarcerated.	2	2				Auxiliary, purulent.	1	1			
Inguinal.	21	20	1			Inguinal.	2	2			
Post-operative.	1	1				Malaria:					
Strangulated.	4	2	2			Acute.	1	1			
Direct.	1	1				Chronic.	1	1			
Herpes labialis.	1	1				Unclassified.	1	1			
Hydrocele.	9	9				Estivo-autumnal.	29	26	2		1
Chronic.	1	1		1		Pernicious.	1	1			
Hydroperitoneum.	3	2	1			Quartan.	1	1			
Hydrosalpinx.	1	1				Rheumatic, acute.	1	1	1		
Hydrothorax:						Tertian.	38	34	1	3	
Dextra.	1	1				Unclassified.	20	19	1		
Double.	3	3				Undetermined.	3	3			
Unclassified.	1	1		1		Malingers.	1	1			
Hyperchlorydia.	3	3				Malnutrition.	1	1			
Hyperemia, passive, liver.	1	1		1		Mania, acute.	4	3	1		
Hyperthyroidism.	4	4				Marasmus.	2	2			1
Hypertrophy:						Mastitis:	8	8	4		1
Cervix.	2	2				Acute.	1	1			
Heart.	1	1				Double.	1	1	1		
Inferior turbinate.	1	1				Suppurative.	1	1			
Tonsils.	35	35				Mastoiditis:					
Icterus neonatorum.	1		1			Acute.	3	2	1		
Ileus, paralytic.	1		1			Chronic.	2	2			
Ileo-colitis.	1		1			Measles.	8	3		6	
Chronic.	1	1				Meningitis, acute.	8	8			
Inertia, uterus.	1	1				Meningocele.	1	1			
Indigestion:						Menorrhagia.	1	1			
Acute.	3	3				Metastasis.	1	1			
Unclassified.	2	2				Metrorrhagia.	1	1	1		
Infection:						Mitoma.	1	1			
General—						Monodiasis.	89	83	4	2	
Endogenous—						Myelitis.					
Gonococcus.	24	23		1		Acute.	2	1	1		
Monad.	4	4				Myocarditis:					
Septicemia.	10	9	1			Acute.	8	5	3		
Streptococcus.	1	1				Chronic.	3	3			
Sinus.	1	1				Necrosis:					
Umbilical cord.	2	2				Maxillary.	3	1	2		
Exogenous, puerperal.	5	5				Suppurative.	1	1			
Local:						Nephritis:					
Abscess.	82	74	7	1		Acute.	48	33	14	1	
Cellulitis.	1	1				Chronic.	48	40	8		
Ears.	1	1				Unclassified.	10	6	4		
Eyelid.	1	1				Nephrolithiasis.	4	4			
Finger.	1	1				Nephroptosis.	2	2			
Furunculosis.	1	1				Neuralgia, facial.	2	2			
Prepatellar.	1	1				Cranial nerve.	1	1			
Umbilicus.	1	1		1		Lumbar.	1	1			
Iridocyclitis:						Trifacial.	1	1			
Chronic.	3	3				Stomach.	1	1			
Inflammation.						Neurasthenia.	3	3			
Pelvic.	5	5				Cerebral.	1	1			
Spermatic cord and epididymis.	1	1				Unclassified.	3	3			
Insanity.	1			1		Neuritis:					
Iritis, chronic.	1	1				Acute.	11	11			
Keratitis:						Bronchial, acute.	1	1			
Interstitial.	3	3				Multiple, acute.	1	1			
Parenchymatosa, lue-tica.	1	1				Multiple, chronic.	1	1			
Phlyctenular.	1	1				Peripheral.	6	6			
Laryngitis:						Peripheral—					
Acute.	2	2				Acute.	4	4			
Unclassified.	2	1	1			Post-partum.	4	3		1	
Leukoma.	2	2				Sciatica, chronic.	8	8			
Leprosy.	1			1		Unclassified.	2	2			
						No diagnosis.	4	3			1
						Normal, no disease.	2	2			
						Normal baby.	6	6			

Philippine General Hospital—Continued.

CASES TREATED—Continued.

Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.	Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.
Obstruction:						Pleuritis:					
Intestinal	4	3	1			Acute	6	4	1	1	
Mechanical	5	5				Sero-fibrinous	3	2	1		
Ophthalmia neonatorum	1	1				Chronic	14	13	1		
Oophoritis	1	1				Dextra	1	1			
Acute	2	2				Obliterative	2	2			
Suppurative	2	2				Sero-fibrinous	8	8			
Unclassified	1	1				Unclassified	4	4			
Orchitis	0	0				Fibrinous	1	1			
Acute	7	7				Pneumonia:					
Chronic	2	1	1			Broncho	37	16	21		
Gonorrheal	1	1				Traumatic	1	1			
Subacute	1	1				Lobar	44	32	10	2	
Suppurative	1	1				Terminal	1	1			
Unclassified	1	1				Unclassified	4	1	3		
Osteomyelitis	1	1				Lobular	5	4	1		
Chronic	3	3				Pneumothorax	1	1			
Unclassified	2		2			Poisoning	4	3	1		
Otitis external	2	2				Silver nitrate	1	1			
Osteosarcoma	1	1				Polyhydramnios	1	1			
Otitis media:						Polyneuritis, acute	1	1			
Acute	8	7		1		Polypus	0	0			
Chronic	3	3				Nasal	7	7			
Suppurative	1	1				Poethitis, acute	1	1			
Acute	2	1	1			Pott's disease	1	1			
Chronic	4	3	1			Pregnancy	45	43		1	1
Unclassified	1	1				Proctocele	1	1			
Unclassified	2	2				Prolapsus uteri	1	1			
Otosclerosis	1	1				Anus	2	2			
Oxyuriasis	4	4				Ovary	1	1			
Panophthalmitis	3	3				Prostatitis	4	4			
Paralysis	1	1				Psoriasis	1	1			
Trifacial nerve	1	1				Psychosis, mania depres-					
Paramyoclonus	1	1				sive	3	2		1	
Paraphimosis	1	1				Pterygium	4	4			
Paresis, general	1			1		Puerperium	7	7			
Parotitis:						Purpura, scorbutica	1	1			
Acute	1	1				Pyelitis:					
Chronic	1	1				Acute	2	2			
Parturition:						Chronic	2	2			
Abnormal	15	14	1			Pyemia	1	1			
Normal	73	73				Pyonephritis	2	2			
Peliosis, rheumatic	1	1				Pyorrhea alveolar	2	1	1		
Pemphigus	2	1	1			Rectocele	1	1			
Perforation:						Retention of urine	1	1			
Intestine	1		1			Uterine	1	1			
Septum	1	1				Retinitis acute	1	1			
Pericarditis:						Retroflexion uterus	10	10			
Sero-fibrinous	4	1	2	1		Retrosinistroflexion,					
Serous	1	1				uterus	1	1			
Unclassified	1		1			Retroversion, uterus	28	28			
Peripheral						Recklinghausens disease	1		1		
Chronic	1	1				Rhinitis:					
Peritonitis:						Acute	1	1			
Acute	11	4	7			Specific	1	1			
General	1	1				Rheumatism:					
Pelvic	5	5				Acute	1	1			
Chronic	1	1				Chronic	2	2			
Pelvic	1	1				Salpingitis:					
General	2	0	2			Acute	2	2			
Local, subacute	1	1				Chronic	1	1			
Pelvic, local	1	1				Suppurative	3	3			
Unclassified	2		2			Unclassified	1	1			
Pelvic	1	1				Salpingo-oöphoritis,					
Periostitis	1	1				chronic	2	2			
Pharyngitis:						Salpingovaginitis	1	1			
Acute	4	4				Sarcoma:					
Subacute	1	1				Thigh	1	1			
Phymosis	3	3				Neck	1	1			
Congenital	1	1				Scabies	7	6		1	
Unclassified	8	8				Chronic	1	1			
Incomplete	2	2				Unclassified	4	4			
Pityriasis, rubrapilaris	1	1				Sciatica	1	1			

Philippine General Hospital—Continued.

CASES TREATED—Continued.

Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.	Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.
Sclerosis:						Tuberculosis:					
Unclassified	1	1				Abdomen	1	1			
Amyotrophic	3	3				Bladder	1	1			
Multiple	1	1				Epididymis and testis	1	1			
Septum, deviated	1	1				Femur	1	1			
Shock	2		2			Foot	1	1			
Splenitis:						Hip	1	1			
Acute	1		1			Intestines	4	3	1		
Chronic	2		2			Neck	1	1			
Unclassified	2	1	1			Joints	10	10			
Splenomegaly, malarial	2	2	1			Lungs	117	98	9	9	1
Sprain	6	6				Lymphatics	8	8			
Foot	1	1				Mesenteric glands	3	3			
Knee	1	1				Meninges	1		1		
Sprue	2	2				Omentum	1	1			
Staphylocoma, corneal	2	2				Peritoneum	2	2			
Stenosis, cervix	4	4				Pleura, sinistra	1			1	
Stomach, malposition	1		1			Shoulder	1	1			
Stomatitis	2	1	1			Rib	1	1			
Acute	1	1				Spine	3	3			
Mercurialis	2	2				Kidney	1		1		
Chronic	1	1				Testicles	1	1			
Strabismus:						Tibia	1	1			
Convergent	1	1				Tumor:					
Unclassified	1	1				Benign—					
Streptococcemia	1	1				Alimentary system,					
Stricture	6	6				female	1	1			
Urethral	3	3				Carcinoma, cheek	1	1			
Strongyloidiasis	12	12				Glandular system,					
Subinvolution, uterus	6	6				male	1	1			
Sunburn	1	1				Fibro-lipoma shoulder	1	1			
Stye	1	1				Orbit	1	1			
Syphilis:						Reproductive system,					
Acquired	1	1				female	12	11	1		
Congenital	1	1		1		Unclassified	3	3			
Nasal septum	1	1				Malignant—					
Nervous system	1	1				Carcinoma, cheek	1	1			
Nose	1	1				Digestive system—					
Optic nerve	1	1				Female	2	1	1		
Primary	6	6				Male	3	3			
Quaternary	3	2	1			Glandular system,					
Secondary	8	8				male	2	2			
Tertiary	60	60				Locomotor system,					
Tuberculous	1	1				male	1	1			
Unclassified	9	9				Reproductive system,					
Tendo-myositis	1	1				female	3	3			
Tinea:						Tunica vaginalis	6	6		1	
Imbricata	2	2				Ulcer:					
Versicolor	7	7				Chronic	3	3			
Unclassified	1		1			Leg	1	1			
Teniasis	3	3				Corneal	5	4		1	
Tetanus	2		1	1		Duodenal, chronic	2	2			
Tabes, dorsalis	2	2	0			Gastric	1	1			
Tendo-synovitis	1	1				Septum	1	1			
Thrombo-phlebitis, arms	1	1				Serpens	3	3			
Thyroglossal duct, obstruction	1	1				Stomach, acute	1	1			
Tonsillitis:						Thigh	1	1			
Acute	4	3		1		Tuberculosis, back	1	1			
Chronic	38	38				Undetermined	13	7		6	
Unclassified	5	5				Uremia	4			4	
Torticollis	1	1				Urethra, absence, congenital	1	1			
Toxemia, exogenous	30	27	2	1		Urethritis:					
Trypanosomiasis	2	2				Acute	2	2			
Trycocephaliasis	571	552	15	4		Chronic	1	1			
Tricuriasis	1	1				Gonorrheal	4	4			
Trachoma	1	1				Posterior	1	1			
Trichomoniasis	1	1				Subacute, gonorrheal	1	1			
						Gonococcus	1	1			

Philippine General Hospital—Continued.

CASES TREATED—Continued.

Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.	Diagnosis.	Number of cases.	Discharged.	Died.	Transferred.	Deserted.
Urticaria, chronic	1	1				Wound:					
Uterine, inertia	1	1				Contused	22	20	1	1	
Uterus	28	26	2			Crushed	8	6	1	1	
Vaccinia	1	1				Gunshot	2	2			
Vaginitis:						Incised	4	3		1	
Acute	2	2				Infected	11	9	1	1	
Chronic	1	1				Lacerated	73	70	2	1	
Gonorrheal	1	1				Penetrating	1	1			
Valvular disease	5	3				Stab	18	14	3	1	
Valvulitis, chronic	16	11	5			Cut	1	1			
Varicella	1			1		Punctured	2	1	1		
Varicocoele	5	5				Perforated	3	3			
Vitiligo	3	2	1			Yaws	6	6			
Weil's disease	1	1									
Wart, submaxilla	1	1				Total	4,419	3,966	349	73	12

This table covers only three months—April, May, and June 1912.

BILIBID PRISON REPORT OF SICK.

	Diseases.	Re-main-ing at last report.	Ad-mitted.	Died.	Trans-ferred.	Dis-charged.	Re-main-ing.
2	Beriberi:						
	Chronic	1	4	2		2	1
	Acute		5	1		3	1
6	Diphtheria		1		1		
7	Dysentery:						
	Amebic—						
	Acute	17	272			282	7
	Chronic		7	2		5	
	Catarrhal		4			4	
9	Fever, dengue		81			81	
16	Leprosy	1			1		
	Nodular		1		1		
	Tubercular		1		1		
17	Malaria:						
	Estivo-autumnal	1				1	
	Tertian		25			25	
	Undetermined		57			57	
18	Measles		28			25	3
21	Mumps	2	53			51	4
23	Smallpox						
	Varioloid		13		3	9	1
24	Typhoid fever (abdominal typhus)		1	1			
26	Varicella	1	7		1	7	
28	Other epidemic diseases: Paratyphoid		1			1	
30	Alcoholism:						
	Acute		1			1	
	Chronic		4			3	1
31	Anemia, pernicious, progressive		1			1	
36	Cancer and other malignant tumors of peritoneum, intestines and rectum: Sarcoma of intestines		1	1			
41	Chancroid and chancroidal bubo: Glans penis	1				1	
48	Drug habits, morphinism	15	312			322	5
49	Drug habits, opiumism	9	228			230	7
54	Gonorrhea and gonorrheal bubo		5			3	2
55	Other gonorrheic infections and results:						
	Fistula, perineal		3			3	
	Arthritis, acute, left knee		1				1
	Urethral stricture		2			2	
60	Myalgia	2	16			17	1
64	Pott's disease	1					1
65	Purulent septicemia and infection (nonpuer-peral): Pyemia		1	1			

Bilibid Prison report of sick—Continued.

	Diseases.	Re- main- ing at last report.	Ad- mitted.	Died.	Trans- ferred.	Dis- charged.	Re- main- ing.
67	Rheumatism, articular:						
	Acute		10			10	
	Chronic	1	14			15	
69	Scurvy		2	1			
70	Syphilis, acquired, primary		1		1	1	
71	Syphilis, acquired, secondary and tertiary:						
	Secondary	2	21			21	2
	Tertiary		5			5	
	Necrosis of sternum	1				1	
	Necrosis of the palatine vault	1				1	
	Necrosis of the third right rib	1				1	
73	Tetanus		4	1	2		
75	Tuberculosis, disseminated		2	1		1	
76	Tuberculosis, miliary, acute		1	1			
78	Tuberculosis of the bones and joints: Tarsal and metatarsal bones, right foot						
80	Tuberculosis of the lungs	129	164	80	2	72	139
82	Tuberculosis of other organs:						
	Epididymitis		1			1	
	Spermatic cord, left		1			1	
	Testicle	2	1			3	
	Chest wall, left		1	1			
84	Tuberculous adenitis:						
	Axillary		3			3	
	Cervical	1	5			6	
	Retroperitoneal glands, with obstruction of common hepatic duct		1				1
85	Tuberculous enteritis	1	1			1	1
86	Tuberculous peritonitis		3	1			2
90	Other nonepidemic diseases: Anemia		1			1	
103	Meningitis, cerebral, suppurative		1	1			
107	Other diseases of the brain: Hemiplegia, right		1				1
109	Ataxia, locomotor	1	2			3	
117	Paralysis, bulbar		1				1
121	Spastic paraplegia	3	2			3	2
123a	Melancholia passiva		4		4		
129b	Maniacal frenzy		1		1		
143a	Idiocy		1		1		
155	Hysteria		1			1	
	Contraction of left knee		1				1
159	Neuralgia		1			1	
	Intercostal		1			1	
161	Neuritis:						
	Periphere, chronic		1			1	
	Peripheral nerves		1			1	
162	Sciatica		3			3	
168	Amblyopia, acute, both eyes	1				1	
171	Blepharitis		3			3	
172	Cataract, left eye		1			1	
	Senile		1			1	
174	Conjunctivitis, acute	1	41			38	4
175	Conjunctivitis, follicular		3			3	
184	Injuries to eye: Contusions		1			1	
186	Keratitis	1	3			9	
196	Pterygium		1			1	
198	Staphyloma		1			1	
203	Other diseases of the eye and its adnexa: ul- cer, right cornea		1				1
204	Abscess of the ear:						
	Auditory canal		1			1	
	Left		1			1	
	Deafness		1			1	
214	Otorrhea	1	2			3	
217	Other tumors of the ear: Cyst, sebaceous		1			1	
218	Other diseases of the ear and its adnexa:						
	Furuncle, external, auditory canal		1			1	
229	Mitral incompetency	1	1				2
238	Aneurism, arterio-venous: Lip	1				1	
239	Aneurism of aorta: Arch of aorta		2			2	
242	Arterio-sclerosis	3	5			7	1
251	Hemorrhoids, internal	1	49			45	5
257	Varicocele		4			4	
259	Varicose veins		7			7	
	Right leg		2				2
261	Adenitis, nonvenereal, inguinal		1			1	
270	Filariasis		1			1	
	Diurna		1			1	
	Nocturna		7			7	
276	Coryza, acute		1			1	

Bilibid Prison report of sick—Continued.

	Diseases.	Re- main- ing at last report.	Ad- mitted.	Died.	Trans- ferred.	Dis- charged.	Re- main- ing.
329	Other diseases of the nose and throat: Polypus.		1			1	
331	Bronchitis:						
	Acute	1	36			37	
	Chronic		10			10	
332	Broncho-pneumonia		6			4	2
336	Hemoptysis		5			5	
334	Lung, congestion of	1	2			3	
338	Lung, gangrene of		3	2			1
300	Pneumonia, lobar	1	55	12		40	4
301	Pneumonia, lobular		1			1	
302	Other diseases of the lungs nontubercular:						
	Abscess		2	2			
306	Asthma	2	23			21	4
304	Empyema	1	2	2		1	
309	Pleurisy, fibrinous	1	2			3	
	Acute		3			3	
310	Pleurisy, sero-fibrinous:						
	Acute		8			4	4
	Chronic		4			3	1
314	Other diseases of the respiratory system:						
	Pleurisy, obliterative, chronic		1	1			
315	Abscess of fauces		2			2	
334	Pharyngitis, acute		2			2	
335	Stomatitis, acute		3			3	
336	Tonsillitis, chronic		3			2	1
339	Other diseases of the mouth pharynx and esophagus:						
	Sprue		14			14	
	Abscess, alveolar		1			1	
344	Gastritis:						
	Acute		11			11	
	Chronic	2	5			7	
	Alcoholic		1			1	
357	Stomach, ulcer of		1			1	
359	Anus, abscess of		4			4	
361	Anus, fistula of, chronic	1	11			11	1
364	Colitis, acute		1			1	
365	Constipation:						
	Acute		25			24	1
	Chronic	2	18			20	
368	Enteritis, acute		4			4	
369	Enterocolitis, acute		1			1	
371	Gastro-enteritis:						
	Acute		1			1	
	Chronic	1	2			3	
374	Hernia, inguinal	3	52			52	3
378	Hernia, ventral		13			10	3
	Epigastric, congenital		2				2
379	Intestines, abscess of, ischio-rectal		1			1	
380	Intestines, fistula of: Appendectomy, per- formed to relieve fistula from appendectomy	1				1	
387	Intestines, ulcer of:						
	Peritonitis, suppurative, due to perfora- tive duodenal ulcer		1	1			
	Ulcer, duodenal, perforated		1			1	
395	Other diseases of the intestines: Stricture of rectum, benign		2			2	
396	Ankylostoma duodenalis	11	1188			1189	10
397	Ascaris lumbricoides	8	1357			1335	80
399	Balantidium coli		8			8	
401	Bothriocephalus latus		3			3	
407	Tenia nana		8			8	
408	Tenia saginata		35			35	
409	Tenia solium		1			1	
414	Cholecystitis		2			2	
415	Cholelithiasis	1	3	1		3	
423	Liver, cirrhosis of, chronic		1			1	
431	Appendicitis and typhlitis:						
	Appendicitis, gangrenous		1			1	
	Appendicitis—acute		6			6	
	Chronic		2			1	1
	Typhlitis with adhesions		1			1	
433	Peritonitis, nonpuerperal, suppurative, acute		1	1			
441	Spleen, enlargement of		1			1	
445	Spleen, other diseases of (excluding kala- azar): Splenomegalia, undetermined, chronic		1			1	
446	Other diseases of the digestive system: Ap- pendectomy		1			1	
454	Nephritis, interstitial (Bright's disease), chronic		6	4		2	

Bilibid Prison report of sick—Continued.

	Diseases.	Re- main- ing at last report.	Ad- mitted.	Died.	Trans- ferred.	Dis- charged.	Re- main- ing.
455	Nephritis, parenchymatous:						
	Acute.....		4	2		2	
	Chronic.....	1	2			2	1
456	Nephrolithiasis.....		1			2	
459	Pyelitis, noncalculous.....		2	1			
462	Pyonephrosis.....		1			1	
480	Urethra, stricture of.....		2			2	
483	Other diseases of the bladder and adnexa: Fis- tula, perineal.....		1			1	
486	Epididymitis.....		7			7	
489	Hydrocele.....		69			68	1
491	Orchitis.....		1			1	
492	Paraphimosis.....		1			1	
496	Phimosis.....		3			3	
520	Endometritis.....		1			1	
548	Premature birth.....		2			2	
549	Other ailments and complications of the gra- vid state: Pregnancy, normal.....		2			1	1
550	Abortion.....		1				1
552	Labor, normal.....		3			2	1
	Stillbirth.....		2			2	
570	Suprarenal capsules, other diseases of: Hyp- ernephroma, left.....		1	1			
578	Thyroid body, other diseases of: Goitre cystic.....		1			1	
586	Dermatitis:						
	Hand—						
	Infectious.....		1			1	
	Acute.....		1			1	
	General, undetermined.....		1			1	
588	Eczeema:						
	Acute, both hands.....		1			1	
	Chronic.....	1	1			2	
591	Erythema.....		1			1	
594	Herpes zoster.....		6			6	
596	Ichthyosis.....		1			1	
602	Nails, ingrowing.....		3			3	
606	Pediculosis: Capitis.....		3			3	
606	Pemphigus: Contagiosus, acute.....		1				1
614	Scabies.....		8			8	
619 ^a	Urticaria.....	1	2			3	
622	Abscess, acute; phlegmon:						
	Abdominal wall.....		3			3	
	Arm.....		1			1	
	Breast.....		1			1	
	Buttock.....		2			2	
	Chest wall.....		1			1	
	Foot.....		8			8	
	Hand.....		1			1	
	Leg.....	1	4			5	
	Lip.....		1			1	
	Perineal.....		3			3	
	Shoulder.....		1			1	
	Submaxillary.....		2			2	
	Knee.....		1			1	
	Gluteal, left.....		1			1	
	Thumb.....		1			1	
	Scrotum.....		1			1	
	Plegmon of neck.....		1	1			
625	Bunions, suppurating, acute.....		1			1	
626	Carbuncle:						
	Upper lip.....		1			1	
	Back.....		1			1	
	Back of neck.....		3			3	
629	Cysts:						
	Inferior maxilla.....		1			1	
	Sebaceous—						
	Buttock.....		1			1	
	Gluteal.....		1			1	
	Submaxillary.....		1			1	
	Sebaceous.....		1			1	
631	Furuncle:						
	Buttock.....		1			1	
	Face.....		2			2	
	Furunculosis.....		1			1	
633	Lymphangioma: Cheek.....		1			1	
635	Lipoma:						
	Left buttock.....		1			1	
	Back of neck.....		1			1	
641	Papilloma:						
	Anus.....		1			1	
	Shoulder, congenital.....		1			1	

Bilibid Prison report of sick—Continued.

	Diseases.	Re- main- ing at last report.	Ad- mitted.	Died.	Trans- ferred.	Dis- charged.	Re- main- ing.
642	Ulcer:						
	Buttock		1			1	
	Arm, chronic		1			1	
	Foot, chronic		4			4	
	Leg, chronic	2	5			6	1
662	Mastoiditis, right, chronic	1	1			1	
669	Osteomyelitis, right tibia, chronic	1	1				1
666	Ankylosis: Elbow	1	1			1	
667	Arthritis, acute, left knee	1	1			1	
671	Synovitis	1	1			1	
684	Other diseases of the organs of locomotion:						
	Fistula, foot		1			1	
702	Harelip		2			2	
709	Other malformations:						
	Deformity of great toe, congenital		1			1	
	Hammer fingers		1			1	
	Supernumerary digits, thumb, right hand.		1			1	
	Webtoes		1			1	
710	Senile debility	2	2			2	2
711	Abrasions and blisters, mechanic.		1			1	
	Right foot		1			1	
714	Burns by fire:						
	Axillary contractures		1			1	
	Second degree		1			1	
717	Contusions:						
	Chest, right side	1				1	
	Foot, right		1			1	
	Kidney		1			1	
	Right knee		1			1	
	Neck		1			1	
	Foot		1			1	
719	Dislocations:						
	Shoulder, subcoracoid		1			1	
	Right shoulder		1			1	
722	Fractures:						
	Coracoid process of right scapula		1			1	
	Femur, surgical neck		1			1	
	Tibia and fibula, left		1			1	
	Radius, left, upper third	1				1	
	Right humerus, surgical neck		1			1	1
	Ribs, left		1			1	
	Base of skull		1			1	
	Left clavicle, outer third		1			1	
	First phalanx of right forefinger		1			1	
724	Scalds: Hot tar		2			2	
725	Sprains:						
	Back		1			1	
	Left foot		1			1	
731	Wounds, contused: Toes		1			1	
733	Wounds, incised:						
	Deltoid, right		2			2	
	Right elbow joint		1			1	
	Foot		1			1	
734	Wounds, lacerated:						
	Foot		7			7	
	Foot, infected	1	3			4	
	Perineum		1			1	
	Urethra		1			1	
735	Wounds, punctured:						
	Foot		1			1	
	Infected		1			1	
736	Other accidental causes:						
	Amputation of fingers	1				1	
	Loss of left auricle, traumatic		1			1	
	Paralysis, median nerve, traumatic		1			1	
	Nostrils, traumatic stricture		1			1	
	Infection left thigh		1			1	
745	Fever, undetermined		13			13	
747	Under observation	6	140			134	13
	Total	259	4,887	126	19	4,710	291

BILIBID PRISON REPORT OF DEATH.

Diseases.	Presidio.				Carcel.				Total.	Conditions.			
	Filipi- nos.		Chi- nese.		Filipi- nos.		Chi- nese.			Married.	Single.	Widowed.	Unknown.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.					
Beriberi	1				3				4	3	1		
Cancer and other malignant tumors of peritoneum, intestines, and rectum:													
Sarcoma of intestines	1								1	1			
Cholelithiasis, chronic							1		1		1		
Dysentery, amebic, chronic	2				1				3	3			
Empyema	2								2	1		1	
Hypernephroma, left adrenal	1								1			1	
Lung, abscess of	1				1				2			2	
Lung, gangrene of	2								2	1	1		
Nephritis, interstitial (Bright's disease), chronic	3				1				4	3	1		
Nephritis, parenchymatous, acute	1				1				2	1	1		
Meningitis, cerebral, suppurative, acute.							1		1		1		
Other forms of mental alienation	6				3				9	3	4	2	
Peritonitis, nonpuerperal, suppurative, acute							1		1	1			
Peritonitis, suppurative, due to perfor- ated duodenal ulcer							1		1				1
Phlegmon neck	1								1			1	
Pleurisy, obliterative, chronic	1								1				
Pneumonia, lobar	6				5		1		12	9	1	2	
Pyelitis, noncalculous	1								1	1			
Pyemia							1		1		1		
Scurvey	1								1		1		
Tetanus	1						1		2	1	1		
Tuberculosis disseminated	1								1		1		
Tuberculosis, miliary, acute					1				1	1			
Tuberculosis of other organs, chest, wall, left	1								1			1	
Tuberculosis of the lungs	66		2		11		2		81	38	31	12	
Tuberculous peritonitis	1								1	1			
Typhoid fever, abdominal typhus					1				1	1			
Legally executed					9				9	5	3	1	
Total	100		2		37		9		148	75	49	23	1

Died in Bilibid Hospital, 127; legally executed, 9; died in San Lazaro Hospital, 11; died on board the steamer *Ysidoro Pons*, 1. Total, 148.
One stillbirth also reported.

IWAHIG PENAL COLONY SICK REPORT.

	Diseases.	Remain- ing July 1, 1911.	Ad- mitted.	Died.	Dis- charged.	Remain- ing.
2	Beriberi: Oedematous		1		1	
7	Dysentery: Amebic, chronic	1	12		11	2
17	Malaria:					
	Black water fever		2	2		
	Cachexia		24	1	23	
	Estivo-Autumnal		80		80	
	Quartian		4		4	
	Tertian	8	662	1	666	3
18	Measles		11		11	
60	Myalgia		16		16	
65	Septicemia, nonpuerperal		2	1	1	
71	Syphilis, tertiary		3	1	2	
80	Tuberculosis of the lungs	13	50	14	43	6
84	Tuberculous adenitis, cervical		1		1	
95	Brain, softening of		1	1		
123a	Maniacal exaltation		1		1	
139	Cerebral syphilis		1		1	
153	Headache		2		2	
168	Migraine		1		1	

Iwahig penal colony sick report—Continued.

	Diseases.	Remain- ing July 1, 1911.	Ad- mitted.	Died.	Dis- charged.	Remain- ing.
159	Neuralgia		3		3	
160	Neurosthenia		1		1	
161	Neuritis, peripheral		1		1	
174	Conjunctivitis, acute		2		1	1
186	Iritis		1		1	
222	Endocarditis, acute		3	1	1	1
225	Heart, dilatation of		1	1		
229	Mitral incompetency		1		1	
230	Mitral stenosis		2		2	
242	Arterio-sclerosis		6		6	
251	Hemorrhoids, external		1		1	
261	Adenitis, nonvenereal:					
	Inguinal, acute, suppurative		1		1	
	Cervical		1		1	
262	Lymphangitis, nonvenereal		1		1	
288	Nasal fossae, abscess of		1		1	
291	Bronchitis:					
	Acute		9		9	
	Chronic		2		2	
292	Broncho-pneumonia		2		2	
298	Hemoptysis		1		1	
296	Lung, edema of		1	1		
300	Pneumonia, lobar		3	3		
380	Gingivitis		1		1	
384	Pharyngitis, acute		1		1	
385	Stomatitis, acute		1		1	
386	Tonsillitis, chronic		1		1	
339	Other diseases of the mouth, pharynx, and esophagus: Parotiditis		1		1	
344	Gastritis, acute		2		2	
359	Anus, abscess of	1			1	
360	Anus, fistula of		1		1	
365	Constipation:					
	Acute	2	7		9	
	Chronic		4		4	
368	Enteritis, acute		8		3	
396	Ankylostomiasis		7		7	
399	Balantidium coli		1		1	
402	Oxyuris vermicularis		1		1	
404	Strongyloides intestinalis		1		1	
409	Tenia solium		3		3	
411	Trichocephalus dispar		1		1	
414	Cholecystitis		1		1	
418	Hepatitis		32		32	
423	Liver, cirrhosis of		6		6	
424	Liver, congestion of		37		37	
443	Spleen, inflammation		1		1	
454	Nephritis, interstitial, chronic		16		15	1
455	Nephritis, parenchymatous, acute		1		1	
585	Dermatitis: Venenata		1		1	
593	Herpes		1		1	
594	Herpes zoster		1		1	
614	Scabies		1		1	
616	Tinea (sycosis)		1		1	
621	Other diseases of the skin:					
	Ecthyma		1		1	
	Keratosis planter		1		1	
622	Abscess, acute; phlegmon:					
	Arm		1		1	
	Finger		1			1
	Foot	1	5		6	
	Hand		7		7	
	Inguinal		1		1	
	Perineal		1		1	
	Shoulder		1		1	
	Testicle		1		1	
	Thigh		6		6	
626	Carbuncle:					
	Cheek		1		1	
	Neck		1		1	
631	Furuncle:					
	Abdominal		1		1	
	Groin		1		1	
	Thigh		2		2	
642	Ulcer: Leg		1		1	
648	Ulcer, tropical		1		1	
647	Abscess, alveolar	1			1	
667	Arthritis, acute		3		3	
672	Other diseases of the joints		1		1	
711	Abrasions and blisters, mechanical; Foot		1		1	
714	Burns of fire; Foot (first degree)		1		1	

Iwahig penal colony sick report—Continued.

	Diseases.	Remain- ing July 1, 1911.	Ad- mitted.	Died.	Dis- charged.	Remain- ing.
717	Contusions:					
	Back		2		2	
	Foot		8		1	2
	Right hypochondrium		2		2	
719	Dislocations: Foot		1		1	
720	Drowning accidental		1	1		
722	Fractures:					
	Radius and ulna		1		1	
	Femur (refracture)		1		1	
	Clavicle		1		1	
725	Sprains		1		1	
730	Venomous bites and stings		2		2	
731	Wounds, contused:					
	Eye		2		2	
	Hand		1		1	
	Left hypochondrium		1		1	
	Scalp		1		1	
	Toe		2		2	
733	Wounds, incised:					
	Finger		2		2	
	Foot		11		10	1
	Hand		5		5	
	Knee		1		1	
734	Wounds, lacerated:					
	Amputation of finger		1		1	
	Foot	3	8		11	
	Hand	1	1		2	
	Toe		1		1	
735	Wounds, punctured: Foot		2		1	1
736	Other accidental causes: Wounds, shark bite		3		3	
741	Wounds, homicidal		3	1	2	
747	Under observation		11		10	1
	Total	33	1,114	29	1,085	23

NOTE.—Patients admitted 1,111, of whom three had two diseases each. Patients in hospital 22, of whom one has two diseases.

STOCKADE HOSPITAL REPORT OF SICK.

	Diseases.	Re- main- ing at last quar- ter.	Ad- mitted.	Died.	Trans- ferred.	Dis- charged.	Re- main- ing.
7	Dysentery	1	42		7	35	1
8	Erysipelas		1			1	
9	Fever, dengue		9			9	
16	Leprosy		1		1		
17	Malaria		12			12	
18	Measles		11			11	
21	Mumps	31	122			152	1
28	Other epidemic diseases		3			3	
41	Chancroid and chancroidal bubo		2		1	1	
54	Gonorrhea and gonorrheal bubo		2			2	
60	Myalgia		36			36	
67	Rheumatism, articular	1	2			3	
80	Tuberculosis of the lungs		24		21	3	
82	Tuberculosis of other organs		1		1		
86	Tubercular peritonitis		1		1		
121	Spastic paraplegia		1		1		
127	Other diseases of the spinal cord		3		3		
137	Periodic insanity		1		1		
153	Headache		9			9	
154	Hiccough		1			1	
159	Neuralgia		1			1	
161	Neuritis		1			1	
162	Sciatica		5			5	
171	Blepharitis		2			2	
174	Conjunctivitis	1	537			535	3
175	Conjunctivitis, follicular		9			8	1
185	Iritis		2			2	
196	Pterygium		1			1	

Stockade hospital report of sick—Continued.

	Diseases.	Re- main- ing at last quar- ter.	Ad- mitted.	Died.	Trans- ferred.	Dis- charged.	Re- main- ing.
198	Staphyloma.		1			1	
202	Other tumors of the eye and its adnexa.		4			4	
208	Other diseases of the eye and its adnexa.		1			1	
210	Inflammation or ulceration of the ear.		10			10	
218	Other diseases of the ear and its adnexa.		2			2	
229	Mitral insufficiency.		3		2	1	
234	Tricuspid insufficiency.		1			1	
251	Hemorrhoids.		13		1	11	1
258	Varicose ulcers.		1			1	
259	Varicose veins.		3		1	2	
261	Adenitis, nonvenereal.		8			8	
262	Lymphangitis, nonvenereal.		5			5	
270	Filariasis.		5		5		
276	Coryza.		25			24	1
281	Laryngitis.		2			2	
291	Bronchitis.		97		1	94	2
292	Broncho-pneumonia.		2			2	
294	Lung, congestion of.		1	1			
300	Pneumonia, lobar.	1	31	1	1	30	
303	Asthma.		5		4	1	
309	Pleurisy, fibrinous.		1			1	
320	Dental caries.		8			8	
331	Glossitis.		1			1	
334	Pharyngitis.		4			4	
336	Tonsillitis.		17			17	
337	Toothache.		8			3	
340	Anorexia, simple.		1			1	
343	Gastralgia.		7			7	
344	Gastritis.		5			5	
346	Indigestion.		40			40	
357	Stomach, ulcer of.		1			1	
361	Anus, fistula of.		2			2	
363	Colic, intestinal.		5			5	
365	Constipation.		59			59	
368	Diarrhea.		34			33	1
368	Enteritis.		1			1	
371	Gastro-enteritis.		53			53	
374	Hernia, inguinal.		5		1	4	
376	Hernia, strangulated.		1			1	
391	Rectum, fistula of.		6			6	
393	Rectum, prolapse of.		1		1		
396	Ankylostoma duodenalis.		29			29	
397	Ascaris lumbricoides.		13			13	
404	Strongyloides intestinalis.		2			2	
407	Tenia nana.		2			2	
411	Tricocephalus dispar.		17			17	
419	Icterus.		2			2	
431	Appendicitis and typhlitis.		7		2	5	
441	Spleen, enlargement of.		1		1		
448	Hematuria.		1			1	
455	Nephritis, parenchymatous.		1			1	
463	Other diseases of the kidneys.		1			1	
470	Cystitis.		8			3	
480	Urethra, stricture of.		4			4	
483	Other diseases of the bladder and adnexa.		7			7	
486	Epididymitis.		1			1	
489	Hydrocele.	1	8			9	
491	Orchitis.		1			1	
583	Callosities.		3			3	
585	Dermatitis.		3			3	
586	Dhobie itch.		14			13	1
588	Eczema.		1			1	
594	Herpes zoster.		2			2	
605	Pediculosis.		1			1	
606	Pemphigus.		4			4	
609	Pompholix.		4			4	
612	Psoriasis.		7			7	

Stockade hospital report of sick—Continued.

	Diseases.	Re- main- ing at last quar- ter.	Ad- mitted.	Died.	Trans- ferred.	Dis- charged.	Re- main- ing.	
615	Seborrhea		1			1		
621	Other diseases of the skin		7			7		
622	Abscess, acute; phlegmon		93		1	90	2	
626	Carbuncle	4	15		3	16		
629	Cysts		1			1		
630	Fibroma		2			2		
631	Furuncle		198			188	10	
642	Ulcer		22		2	20		
646	Other tumors and growths of the skin, non- malignant.		2			2		
661	Periostitis		3			3		
662	Periostosis		1			1		
666	Ankylosis		1		1			
667	Arthritis		1			1		
668	Bursitis		1			1		
671	Synovitis		11			11		
683	Torticollis		1			1		
684	Other diseases of the organs of locomotion		32			32		
717	Contusions	1	34			35		
719	Dislocations		1		1			
722	Fractures		10	2	1	7		
723	Poisoning		2			2		
726	Sprains		15			14	1	
730	Venomous bites and stings		1			1		
731	Wounds, contused		114			108	6	
732	Wounds, firearm		1			1		
733	Wounds, incised	2	23	2		23		
734	Wounds, lacerated		80	1		79		
735	Wounds, punctured		66	1		65		
736	Other accidental causes		9		2	7		
743	Convalescent		2			1	1	
745	Fever, undetermined	15	224			237	2	
746	Malingering		8			8		
747	Under observation		88			88		
748	Undetermined	9	190		6	192	1	
	Total		67	2,716	8	74	2,666	85

STATISTICS FOR SAN LAZARO HOSPITALS DIVISION.

Patients in hospital July 1, 1911	443
Patients admitted during the year	2,639
Patients discharged during the year	2,073
Patients transferred during the year	231
Patients escaped during the year	11
Patients died during the year	296
Patients remaining June 30, 1912	530

AVERAGE NUMBER OF PATIENTS TREATED PER DAY.

July, 1911	443	January, 1912	455
August, 1911	460	February, 1912	458
September, 1911	492	March, 1912	533
October, 1911	444	April, 1912	543
November, 1911	409	May, 1912	537
December, 1911	432	June, 1912	530

AVERAGE COST OF SUBSISTENCE PER PERSON PER DAY.

July, 1911	P0.273	January, 1912	P0.257
August, 1911	.267	February, 1912	.270
September, 1911	.278	March, 1912	.2901
October, 1911	.252	April, 1912	.2908
November, 1911	.253	May, 1912	.278
December, 1911	.276	June, 1912	.268

Statistics for San Lazaro Hospitals Division—Continued.

INSANE AND LEPER DEPARTMENTS.

Status.	Americans.		Europeans.		Filipinos.		Chinese.		Others.		Total.
	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	
INSANE DEPART- MENT.											
In hospital at last report	7	1	2		186	37	3		1		227
Admitted	42	2	6		98	60	3		5		216
Discharged	41	3	6		27	28	2		3		109
Transferred			1		8	3	1				13
Escaped					1						1
Died	3				46	8	1				58
Remaining	5	1	2		202	58	2		3		273
LEPER DEPART- MENT.											
In hospital at last report			1		102	61					164
Admitted	1				219	91	12				323
Discharged					12	10	8				30
Transferred					15	11	3				29
Escaped			1		141	64					206
Died					2	5					7
Remaining	1				8	6					15
					143	56	1				200

INSANE AND LEPER DEPARTMENTS, BY RACES.

Nationalities.	In hospital July 1, 1911.		Admitted.		Discharged.		Transferred.		Escaped.		Died.		Remaining.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
INSANE DEPARTMENT.														
Americans.....	7	1	42	2	41	3	-----	-----	-----	-----	3	-----	5	-----
Europeans.....	2	-----	6	-----	5	-----	1	-----	-----	-----	-----	-----	2	-----
Filipinos.....	186	37	98	60	27	23	8	3	1	-----	46	8	202	58
Chinese.....	3	-----	3	-----	2	-----	1	-----	-----	-----	1	-----	2	-----
Others.....	1	-----	6	-----	4	-----	-----	-----	-----	-----	-----	-----	3	-----
Total.....	199	38	155	62	79	31	10	3	1	-----	50	8	214	58
LEPER DEPARTMENT.														
Americans.....	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----
Europeans.....	1	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----
Filipinos.....	102	61	219	91	27	21	141	64	2	5	8	6	143	56
Chinese.....	-----	-----	12	-----	11	-----	-----	-----	-----	-----	-----	-----	1	-----
Others.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total.....	108	61	232	91	38	21	142	64	2	5	9	6	144	56

VARIOLOID DEPARTMENT.

Status.	Americans.		Europeans.		Filipinos.		Chinese.		Others.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
In hospital at last report.....	-----	-----	-----	-----	2	2	-----	-----	-----	-----	4
Admitted.....	1	1	-----	-----	408	224	-----	-----	2	-----	636
Discharged.....	1	1	-----	-----	403	223	-----	-----	2	-----	630
Transferred.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Died.....	-----	-----	-----	-----	2	1	-----	-----	-----	-----	3
Remaining.....	-----	-----	-----	-----	5	2	-----	-----	-----	-----	7

Statistics for San Lazaro Hospitals division—Continued.

VARIOLOID DEPARTMENT—Continued.

Date.	In hospital July 1, 1911.	Admitted.	Discharged.	Died.	Remaining.
1911.					
July	4	3	7		
August		4	4		
September		5	3		2
October		2	3		1
November		9	5		5
December		33	34		4
1912.					
January		60	37		27
February		166	121	*2	70
March		163	194	*1	38
April		124	120		42
May		46	74		14
June		21	28		7
Total	4	636	630	*3	7

* Not from varioloid.

NOTE.—Five of cases admitted not varioloid.

MEASLES DEPARTMENT.

Status.	Americans.		Europeans.		Filipinos.		Chinese.		Others.		Total.
	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	
In hospital July 1, 1911	1	0	0	0	1	0	0	0	0	0	2
Admitted	11	13	0	0	288	210	0	3	1	1	527
Discharged	12	13	0	0	281	205	0	3	1	1	516
Escaped	0	0	0	0	1	0	0	0	0	0	1
Died	0	0	0	0	6	1	0	0	0	0	7
Remaining	0	0	0	0	1	4	0	0	0	0	5

Date.	In hospital July 1, 1911.	Admitted.	Discharged.	Died.	Remaining.
1911.					
July	2	8	10		
August					
September					
October		12	12		
November		14	8		6
December		34	35		5
1912.					
January		99	77	2	25
February		153	136	2	40
March		115	147	1	7
April		44	*42	1	5
May		39	40		7
June		9	10	1	5
Total	2	527	*517	7	5

* Escaped, one.

TUBERCULOSIS DEPARTMENT.

Status.	Americans.		Europeans.		Filipinos.		Chinese.		Others.		Total.
	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	
In hospital July 1, 1911					26	7					33
Admitted	3		5	1	504	223			5		743
Discharged			2	1	383	168	2		4		560
Died	1		3		116	53			1		174
Remaining	2				31	9					42

Statistics for San Lazaro Hospitals division—Continued.

DIPHTHERIA DEPARTMENT.

Status.	Americans.		Europeans.		Filipinos.		Chinese.		Others.		Total.
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	
In hospital July 1, 1911.....											
Admitted.....	8	10	1	3	30	30					82
Discharged not diphtheria.....	1	1			4						6
Discharged.....	7	9	1	3	21	22					63
Died.....					5	8					13
Remaining.....											

Of the cases admitted to the diphtheria department, 24 were bacilli carriers and 2 were contacts not found positive.

CHOLERA DEPARTMENT.

In hospital July 1, 1911.....										
Admitted.....	1				10	3				14
Discharged not cholera.....	1				10	3				14
Died.....										
Remaining.....										

BUBONIC PLAGUE DEPARTMENT.

In hospital July 1, 1911.....										
Admitted.....					1					1
Discharged.....					1					1
Died.....										
Remaining.....										

MISCELLANEOUS DISEASES.

Diseases.	In hospital July 1, 1911.	Admitted.	Discharged.	Transferred.	Escaped.	Died.	Remaining.
Tetanus.....		19	7			12	
Parotitis.....		33	28		1		4
Observation.....	2	33	28	2		5	
Cholera contacts.....		7	7				
Pertussis.....		6	5			1	
Opium habit.....	1	1	1				
Erysipelas.....		5	5				
Syphilis.....		3	3				
Rabies.....	1	1				1	
Suspected rabies contact.....		1	1				
Gas bacillus.....		2				2	
Meningitis.....		1				1	
Dog bite.....		2	2				
Suspected cholera contacts.....		27	27				
Carcinoma.....		1				1	
Beriberi.....		1			1		
Bichloride poisoning.....		1				1	
Tonsillitis.....		1	1				
Total.....	2	145	115	2	2	24	4

NOTE.—Two of cases admitted as tetanus were discharged not tetanus. Three of cases admitted as pertussis were discharged not pertussis.

Statistics for San Lazaro Hospitals division—Continued.

SAN LAZARO MORGUE REPORT.

Bodies received.	Number of bodies.	Bodies received.	Number of bodies.
Remaining in morgue from last year.		Dropped:	
Received:		Buried by city	248
Cholera	1	Buried by family	57
Bubonic plague	4	Buried by Bureau of Prisons	2
Leprosy	15	Turned over to family	13
Diphtheria	13	Cremated	32
Tetanus	13	Turned over to Army Morgue	1
Rabies	1	Total	348
Typhoid fever	1		
Pulmonary tuberculosis	182		
All other diseases	118		
Total	348		

MORGUE AND CREMATORY DEPARTMENT.

Diseases.	1911						1912						Total.
	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	
Cholera	1												1
Bubonic plague													4
Leprosy			3	2	1	2	1	2		2	1	2	15
Smallpox													
Diphtheria		2		1	1	2	2		1	1		3	13
Tetanus					1	3	1	1	4	1		2	13
Rabies				1									1
Typhoid fever			1										1
Bacillary dysentery		1										1	2
Gas bacillus					2								2
Poisoning	1												1
Drowning	1												1
Pulmonary tuberculosis	21	10	11	11	19	19	16	13	17	19	13	13	182
Stillborn						1							1
Other diseases	12	9	6	9	8	4	14	13	11	8	6	7	107
Violence						1							1
Suicide											1		1
Meningitis						1							1
Measles												1	1
Total	36	22	21	24	32	33	34	29	33	33	21	30	348

CHINESE HOSPITAL SICK REPORT.

[Dr. Tee Han Kee, physician in charge.]

Status.	Number.		Total.
	Males.	Females.	
In hospital at last report	32		32
Received	233		233
Discharged	130		130
Transferred			
Died	108		108
Remaining in hospital	27		27

REPORT OF PRESCRIPTIONS FILLED AT THE CENTRAL FREE DISPENSARY.

Health districts.	Americans.				For- eign- ers, adults, males.	Filipinos.				Chi- nese, adults, males.	Total.
	Adults.		Children.			Adults.		Children.			
	Males.	Fe- males.	Males.	Fe- males.		Males.	Fe- males.	Males.	Fe- males.		
No. 1, Intramuros...	2,738	1,222	2	28	59	9,453	7,074	1,987	1,683	2	24,196
No. 2, Meisic.....	48				4	1,763	1,233	459	343	44	3,839
No. 4, Sampaloc.....	87	18				1,966	1,302	1,580	1,023		5,926
No. 8, Tondo.....	33	8		2		1,112	974	387	330		2,841
No. 6, Paco.....						245	189	151	176		711
Province (Rizal).....					1	26	6				33
Total.....	2,851	1,243	2	30	64	14,565	10,728	4,514	3,555	46	87,598

REPORT OF SICK AND WOUNDED POOR ATTENDED BY MUNICIPAL PHYSICIANS.

Health districts and physicians.	Americans.		Foreigners.		Filipinos.			
	Adults, males.	Child- ren, males.	Adults.		Adults.		Children.	
			Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.
No. 1, Intramuros, Dr. V. Cavanna.....	3	1	25	2	1,626	1,783	728	660
No. 2, Meisic, Drs. F. Herrera and C. Reyes.....	11	-----	1	-----	435	167	255	178
No. 4, Sampaloc, Dr. F. Castañeda.....	2	-----	2	-----	575	1,077	894	855
No. 5, Tondo, Drs. V. Pantoja and P. Gabriel.....	-----	-----	4	-----	1,502	978	849	556
No. 6, Paco: Dr. J. B. Cabarrus.....	1	1	1	1	260	194	143	182
Dr. Tee Han Kee.....	-----	-----	-----	-----	31	22	27	11
Total.....	17	2	33	3	4,429	4,221	2,886	2,392

Health districts and physicians.	Chinese.			Total.	Cured.		Deaths.		Num-ber of vi-sits.
	Adults.		Child-ren, males.		Males.	Fe-males.	Males.	Fe-males.	
	Males.	Fe-males.							
No. 1, Intramuros, Dr. V. Cavanna				4,828	1,047	951	24	20	11,261
No. 2, Meisic, Drs. F. Herrera and C. Reyes	25		1	1,073	531	259	2	4	4,364
No. 4, Sampaloc, Dr. F. Castañeda	2			3,397	193	291	79	67	4,197
No. 5, Tondo, Drs. V. Pantoja and P. Gabriel	9			3,898	1,507	888	13	18	6,880
No. 6, Paco:									
Dr. J. B. Cabarrus	1			734	224	203	13	16	1,890
Dr. Tee Han Kee	357	5	4	457	324	28			1,922
Total	394	5	5	14,387	3,926	2,620	131	125	30,514

CITY MORGUE REPORT.

Disposition.	Number of bodies.	Disposition.	Number of bodies.
Remaining from last year.....	15	Transferred to Army Morgue.....	7
Received.....	773	Transferred to Government Museum (foetus).....	1
Total.....	788	Transferred to private morgue.....	1
Buried by city.....	466	Remaining after the year.....	16
Buried by family.....	297	Total.....	788

DISPOSITION OF DEAD BODIES.

Disposition.	Number.	Disposition.	Number.
Buried:		Santa Cruz Cemetery.....	116
Balichalic Cemetery.....	1,199	Singalong Cemetery.....	499
Binondo Cemetery.....	271	Tondo Cemetery.....	126
Cathedral Church.....	1	Otherwise disposed of:	
Chinese Cemetery.....	327	Cremated.....	23
Malate Cemetery.....	377	Embalmed for shipment.....	14
Norte Cemetery.....	5,912	Preserved in alcohol (fetuses).....	1
Paco Cemetery.....	364	Remaining in City Morgue.....	16
Pandacan Cemetery:		Remaining in private morgues.....	4
Filipino Church.....	135	Remain ng in Santo Tomas Uni-	
Roman Catholic.....	55	versity.....	
San Pedro Macati Cemetery (Eng-		Transferred to provinces.....	106
lish).....	2		
Santa Ana Cemetery.....	136	Total.....	9,696

In the above total there are included 347 stillbirths, 16 remaining in the City Morgue from previous year, and 38 bodies brought in from the provinces.

DISINTERMENTS.

Cemeteries.	Number.	Cemeteries.	Number.
Balichalic.....	28	Paco.....	118
Binondo.....	1	Santa Ana.....	1
Chinese.....	63	Santa Cruz.....	28
Loma.....	7	Tondo.....	4
Malate.....	18		
Norte.....	11	Total.....	279

GENERAL INSPECTIONS OF HOUSES, PREMISES, VAULTS, ETC., WITH IMPROVEMENTS ORDERED, WHITEWASHED, CLEANED, ETC., BY MEDICAL INSPECTORS, SANITARY INSPECTORS, AND ASSISTANT SANITARY INSPECTORS.

1. Inspections of houses by sanitary inspectors.....	25,469
2. Reinspections of houses for verification of work ordered.....	4,165
3. Inspections of houses by assistant sanitary inspectors and sanitary policemen.....	616,715
4. Reinspections of houses by assistant sanitary inspectors and sanitary policemen.....	177,211
5. Houses ordered cleaned (written).....	3
6. Houses ordered cleaned (verbal).....	115,648
7. Houses cleaned.....	115,418
8. Houses ordered whitewashed and painted.....	597
9. Houses whitewashed and painted.....	505
11. Number of houses recommended condemned and removed.....	24
12. Number of houses condemned and removed.....	15
13. Number of localities where "squatters" are located.....	0
14. Number of samples of water, foods, etc., sent to laboratory.....	5,106
15. Number of reports for same.....	5,546
16. Number of fire-plugs opened or closed for sanitary purposes.....	6
17. Number of hydrants recommended reopened.....	0
18. Number of houses where garbage has not been removed for two days.....	52
19. Number of persons reported sick to municipal physicians.....	17,574
20. Cesspools and vaults ordered cleaned.....	103
21. Cesspools cleaned.....	37
22. Yards ordered cleaned.....	76,581
23. Yards cleaned.....	76,148
24. Yards ordered repaired (repaved, etc.).....	0
25. Yards repaired.....	0
26. Number of cholera cases reported by sanitary inspectors.....	1
27. Number of cholera cases found alive.....	0
28. Number of cholera cases found dead.....	1
29. Number of orders issued during the year.....	1,146
30. Number of orders complied with during the year.....	848
31. Number of orders awaiting action.....	170
32. Number of orders pending in court.....	0
33. Average number of food tiendas in the districts.....	5,423
34. Number of persons convicted for violation of food prohibition orders.....	319
35. Average number of regular inspectors on duty.....	106
36. Average number of regular emergency inspectors on duty.....	63
37. Number of leprosy cases sent to San Lazaro Hospital.....	31
38. Number of plague cases reported.....	2
39. Number of smallpox cases reported (varioid included), varioid.....	43
40. Average number of houses in which traps were set.....	2,798
41. Average number of houses in which bane was placed.....	237
42. Average number of traps set.....	3,951
43. Average number of plates with bane placed.....	96
44. Rats caught by rat catchers.....	1,051

General inspections by sanitary officers—Continued.

45. Rats caught by traps.....	15,845
46. Rats caught by poison.....	9
47. Rats found dead.....	25
48. Average number of rat-catchers employed.....	1

REPORT OF DISINFECTIONS.

Causes for disinfections.	Number of disinfections.	Number of contacts.	Causes for disinfections.	Number of disinfections.	Number of contacts.
Anemia.....	1		Fleas.....	2	
Angina phlegmonous.....	2	14	Flies.....	1	
Anthrax.....	1		Gastro-enteritis.....	32	20
Athrepsia.....	1		Chronic.....	14	21
Beriberi.....	141	57	Glanders.....	4	
Blood poisoning.....	1		Gonorrhea.....	1	
Bronchitis.....	49	8	Gonorrheal ophthalmia.....	1	
Bronchitis:			Ileo-colitis, chronic.....	1	
Capillary.....	8		Indigestion.....	2	
Chronic.....	20	2	Impetigo.....	1	
Broncho-pneumonia.....	3		Insanitary conditions.....	6,589	
Broncho-pneumonia:			Laryngitis, tuberculous.....	2	1
Complication of varicella.....	1	5	Leprosy.....	106	299
Complication of varioloid.....	1		Suspected.....	6	19
Endocarditis malignant.....	1		Malarial fever.....	6	9
Bubonic plague.....	2	* 60	Measles.....	333	1,903
Burns, third degree.....	1		And varicella.....	1	1
Cerebral congestion.....	1	3	Suspected.....	1	5
Chicken-pox.....	5	21	Meningitis.....	26	4
Cholera.....	1	5	Cerebral.....	3	2
Suspected.....	5	54	Chronic.....	1	
Convulsions.....	116		Tuberculous.....	9	1
Dengue and malarial fever.....	1		Mosquitos, larvæ.....	6	
Diarrhea.....	3	2	Nephritis.....	1	3
And dysentery.....	1		Chronic.....	7	12
And enteritis.....	1		Peritonitis perforative.....	1	14
And endocarditis, chronic.....	6		Pulmonary congestion.....	1	
Diphtheria.....	40	164	Rabies.....	2	
And varioloid.....	1		Rickets.....	1	
Bacillus carrier.....	4	5	Septicæmia.....	1	
Distemper, acute.....	1		Sprue.....	2	
Dysentery.....	55	13	Syphilis.....	7	4
Amebic.....	1		Tetanus.....	10	3
And diphtheria suspected.....	1		Ticks.....	1	
And enteritis, chronic.....	2		Tuberculosis, mesenteric.....	1	
Bacillary.....	2		Tuberculosis.....	539	281
Chronic.....	8	17	Typhoid fever.....	25	116
Chronic (cholera vibrio carrier).....	1	4	Undetermined.....	4	17
Empyema, pleurisy.....	1		Varicella.....	185	1,062
Endocarditis.....	1		And tuberculosis, pulmonary.....	1	
Enteritis.....	18	10	Varioloid.....	214	1,043
Chronic.....	55	41	Suspected.....	3	6
Enterocolitis.....	1		Vermin.....	23	
Chronic.....	2		Whooping cough.....	11	
Erysipelas.....	3		Yaws.....	1	
Exhumations.....	279				
Fever colibacillary.....	3		Total.....	9,040	5,341

* Includes 2 dogs and 5 cats.

REPORT OF CREMATION AT PALOMAR CREMATORY.

Animals cremated:	Number.	Refuse cremated:	Cartloads.
Australian horses.....	6	Condemned goods.....	597
Americans horses.....	3	Curtains.....	1
Bulls.....	26	Market.....	465
Carabao.....	21	Organic matter.....	60
Cats.....	487	Rubbish.....	713
Cows.....	6	Sewer screenings.....	226
Deer.....	1	Slops.....	1,484
Dogs.....	384	Trade refuse.....	2,163
Fowls.....	2,057	Miscellaneous.....	63
Goats.....	48		
Monkeys.....	1	Total.....	5,783
Native ponies.....	13		
Pigs.....	558		
Rats.....	191		
Sheep.....	4		
Calves.....	4		
Total.....	8,815		

Also cremated 3,314 old pails and 1,683 garbage pails collected.

REPORT OF OPERATIONS OF THE PAIL-CONSERVANCY SYSTEM.

NIGHT-SOIL COLLECTIONS.

Where cleaned.	Number of installations.	Number of installations in use.	Pails in use.	Pails cleaned.
Private houses.....	6,192	6,043	1,863	647,142
Public buildings.....	143	38	178	67,179
Midden sheds.....	209	207	2,106	766,017
Insular Bureaus.....	19	7	26	9,070
Military buildings.....	39	5	235	34,650
Total.....	6,602	6,300	4,407	1,514,068

CLEANED BY ODORLESS EXCAVATORS.

Where cleaned.	Vaults cleaned.	Loads removed.	Gallons removed.
Private houses.....	1,974	2,805	1,369,500
Public buildings.....	7	52	28,000
Midden sheds.....	2	11	5,500
Insular Bureaus.....	9	88	19,000
Total.....	1,992	2,906	1,420,000

REPORT OF ACTION TAKEN ON APPLICATIONS FOR LICENSES.

Kinds of licenses applied for.	Approved.	Disapproved.	Total acted upon.	Kinds of licenses applied for.	Approved.	Disapproved.	Total acted upon.
Liquors:				Clubs.....	83	1	84
First-class bars.....	60	1	61	Tanneries.....	11		11
Second-class bars.....	7		7	Electrical contractors.....	3		3
Third-class bars.....	1		1	Billard and pool tables.....	208	52	260
First-class bars and restaurants.....	30	1	31	Dyeing and cleaning establishments.....	17	2	19
Second-class bars and restaurants.....	10		10	Bakeries.....	10	6	16
Third-class bars and restaurants.....	1		1	Foundries.....	4		4
Groceries.....	134	1	135	Cinematographs.....	21		21
Druggists.....	13		13	Gelatine and pastries.....	31	4	35
Theaters.....	7		7	Stock yards.....	3		3
Wholesale.....	50		50	Grocery stores.....	72	2	74
Hotels.....	18	1	19	Hot coffee.....	59	2	61
Restaurants.....	763	74	837	Skating rinks.....	3		3
Lodging houses.....	38	1	39	Dairies.....	10		10
Boarding houses.....	99	35	134	Theaters.....	4		4
Native wines.....	2,677	37	2,714	Pawnshops.....	12		12
Cooked foods, fruits, vegetables, soft drinks, and bakery products.....	2,091	88	2,179	Distilleries.....	12		12
Barber shops.....	489	15	504	Mercantile and collecting agencies.....	3		3
Livery stables.....	97	6	103	Embalmers.....	3		3
Laundries.....	36	3	39	Breweries.....	1		1
Bill-posting and advertising agencies.....	19		19	Undertakers.....	10	1	11
Dance halls.....	13	1	14	Auctioneers.....	2		2
Employment agencies.....	2		2	Cakes.....	1		1
Junk shops.....	130	1	131	Candies.....	1		1
Manufactories.....	183	9	192	To sell lime.....	1		1
Tattooers.....	15	1	16	Two additional automobiles.....	1		1
Master plumbers.....	3		3	Drying establishment with two vehicles.....		1	1
Ice cream.....	56	3	59	Shooting galleries.....		1	1
Fruits, vegetables, and ice water.....	2	1	3	Drying establishments.....	1		1
Drying and selling fish.....	33	26	59	Samson sports.....	1		1
				Merry-go-rounds.....	1		1
				Ice water.....	2		2
				Total.....	7,625	877	8,002

SANITARY ENGINEERING DIVISION.
STATISTICAL INFORMATION BY QUARTERS, MANILA, P. I., ONLY.

	1911		1912		Total.
	From July to September.	From October to December.	From January to March.	From April to June.	
Building plans, strong material:					
Approved	157	142	140	114	553
Completed	56	110	88	79	333
Building plans, light material, approved	186	545	142	143	1,016

STATISTICAL INFORMATION BY DISTRICTS, MANILA, P. I., ONLY.

	Health districts.					
	No. 1.	Nos. 2 and 3.	No. 4.	No. 5.	No. 6.	Total.
Building plans, strong material:						
Approved	136	196	106	47	68	553
Completed	102	96	71	22	42	333
Building plans, light material, approved	63	1	95	566	291	1,016
Orders pending June 30, 1911						990
Orders issued:						
Minor orders	68	243	22	159	22	514
Sewer orders	22	78	22	3	7	132
Vacating orders	36	85	8	33	14	176
Total	126	406	52	196	43	822
Orders completed:						
Minor orders	63	184	38	158	21	464
Sewer orders	114	195	163	8	18	498
Vacating orders	46	112	22	18	34	232
Total	223	491	223	184	73	1,194
Orders canceled:						
Minor orders	7	5	5	1	8	26
Sewer orders	17	47	19	0	2	85
Vacating orders	4	1	1	72	2	80
Account of prosecutions	9	26	7	9	5	56
Total	37	79	32	82	17	247
Orders pending June 30, 1912:						
Minor orders						62
Sewer orders						271
Vacating orders						38
Total						371
Total legal prosecutions	10	62	8	9	5	94
Amounts of fines	P220.00	P705.00	P20.00	P50.00	P50.00	P1,045

REPORT OF LEPERS LIVING IN THE PHILIPPINE ISLANDS.

	Race.	Number of—		Children.		Single.		Married.		Widowers.	Widows.	Total.
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.			
Culion leper colony	(a) (b) Filipino	1,644	971	302	160	570	275	698	435	74	101	2,615
San Lazaro Hospital		144	56	10	6	66	23	60	19	8	8	200
Moro Province												25
Estimated number not yet transferred to Culion	do	42	30	3	3	10	4	26	19	3	4	72
Total		1,830	1,057	315	169	646	302	784	473	85	113	2,912

^a Americans, 1; Europeans, 8; Filipinos, 2,610; Chinese, 1. Total, 2,615.

^b Americans, 0; Europeans, 0; Filipinos, 199; Chinese, 1. Total, 200.

**REPORT RECEIVED OF INSANE PERSONS LIVING IN THE VARIOUS PROVINCES
OF THE PHILIPPINE ISLANDS.**

Provinces, etc.	Race.	Number of—		Children.		Single.		Married.		Widowers.	Widows.	Total.
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.			
Abra	Filipino	28	13			21	6	6	3	1	4	41
Agusan	do	5	3			5	1		2			8
Albay	do	40	45			28	27	10	9	2	9	86
Ambos Camarines	do	61	59	2	1	38	34	12	10	9	14	130
Antique	do	54	38			36	17	15	15	3	6	92
Bataan	do	18	13			9	6	6	3	3	4	31
Batanes	do	18	7			17	6	1			1	23
Batangas	do	69	52	11	7	38	28	15	8	5	9	121
Bohol	do	198	164	7		159	144	26	14	6	6	368
Bulacan	do	41	28		1	27	13	8	3	6	6	69
Cagayan	do	18	13			11	5	3	6	4	2	31
Capiz	do	66	61	3	1	36	27	22	15	4	18	126
Cavite	do	33	38			21	16	5	13	7	9	71
Cebu	do	211	132	1		176	107	28	19	6	6	343
Hospicio de San Jose	(a)	47	41									88
Ilocos Norte	Filipino	74	30		1	60	16	13	8	1	5	104
Ilocos Sur	do	101	58	1	2	68	31	22	18	10	7	159
Iloilo	do	58	57	2	3	47	29	6	9	3	16	115
Isabela	do	2	5			1	1		2	1	2	7
Laguna	do	30	36		1	20	13	7	10	3	12	66
Leyte	do	50	38	1		40	24	8	8	1	6	88
Misamis	do	58	36		1	42	24	12	8	4	3	94
Negros Occidental	do	68	31	1	1	47	17	10	8	10	5	99
Negros Oriental	do	93	61	2	2	70	45	17	10	4	4	154
Nueva Ecija	do	28	21			24	14	3	4	1	3	49
Nueva Vizcaya	do	14	5	2		5	3	6	1	1	1	19
Pampanga	do	38	39			24	17	10	10	4	12	77
Pangasinan	do	115	90	1		60	39	40	33	14	18	205
Rizal	do	40	30			28	15	8	10	4	5	70
Romblon	do	11	4			4	2	4	2	3		15
Samar	do	33	17		1	30	6	3	6		4	50
San Lazaro Hospital	(b)	214	58			109	17	84	32	21	9	272
Tarlac	Filipino	12	7	1		5	4	5	3	1		19
Tayabas	do	98	68	4	1	75	47	12	15	7	5	166
Union	do	39	31	3	1	16	21	15	6	5	3	70
Zambales	do	17	15	1		13	6	3	6		3	32
Total		2,099	1,444	43	24	1,410	828	445	334	154	217	3,543

^a Filipinos, 79; European, 9. Total, 88.

^b Americans, 5; Europeans, 2; Filipinos, 260; Chinese, 2; others, 3. Total, 272.

**REPORTS RECEIVED OF BLIND PERSONS LIVING IN THE VARIOUS PROVINCES
OF THE PHILIPPINE ISLANDS.**

Provinces.	Race.	Number of—		Children.		Single.		Married.		Widowers.	Widows.	Total.
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.			
Abra	Filipino	20	21			6	4	7	9	7	8	41
Agusan	do	9	7	1	1	6	4	2	1		1	16
Albay	do	76	63	6	5	44	40	23	5	3	13	139
Ambos Camarines	do	88	64	11	8	30	30	29	8	18	18	152
Antique	do	49	51	3	4	19	22	19	6	8	19	100
Bataan	do	26	21	1	1	14	12	10	1	1	7	47
Batanes	do	13	36	1	1	9	6	7	5	19		49
Batangas	do	80	60	14	12	25	19	28	14	13	15	140
Bohol	do	149	110	17	1	77	74	44	18	11	17	259
Bulacan	do	61	62	4	4	28	29	22	12	7	17	123
Cagayan	do	26	29			11	9	12	6	2	14	55
Capiz	do	112	90	3	4	85	26	54	23	20	87	202
Cavite	do	66	59	8	7	27	25	22	13	9	14	125
Cebu	do	77	69	3	19	44	27	21	8	9	15	146
Ilocos Norte	do	43	42	2	1	8	13	23	5	5	23	85
Ilocos Sur	do	76	69	8	6	37	23	21	17	10	23	145
Iloilo	do	100	104	8	5	46	49	30	19	16	81	204
Isabela	do	7	14			2	2	3	4	2	8	21
Laguna	do	57	40	8	4	28	14	13	9	8	13	97
Leyte	do	75	58	7	4	43	33	16	11	9	10	133
Misamis	do	64	39	6	4	36	16	13	10	9	9	108

Reports received of blind persons, etc.—Continued.

Provinces.	Race.	Number of—		Children.		Single.		Married.		Widowers.	Widows.	Total.
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.			
Mountain	Filipino	49	32									81
Negros Occidental	do	102	69	9	5	50	36	17	9	26	19	171
Negros Oriental	do	82	50	7	1	43	28	25	11	7	10	132
Nueva Ecija	do	51	32	6	1	17	7	21	6	7	18	88
Nueva Vizcaya	do	11	7		2	7	1	3	1	1	8	18
Pampanga	do	113	111	11	6	54	51	31	17	17	37	224
Pangasinan	do	110	94	11	8	43	32	37	29	19	25	204
Rizal	do	79	59	3	5	29	24	35	12	12	18	138
Romblon	do	22	14	4		8	8	9	2	1	4	36
Samar	do	55	26	9	2	31	15	11	3	4	6	81
Tarlac	do	30	27	4	5	11	9	7	5	8	8	57
Tayabas	do	62	50	9	3	33	24	13	8	7	15	112
Union	do	34	31	5	4	13	9	8	9	8	9	65
Zambales	do	30	27	1	1	11	10	12	5	6	11	57
Total		2,104	1,737	191	134	917	734	652	323	295	514	3,841

BAGUIO HOSPITAL DIVISION.

HOSPITAL CASES.

	Diseases.	Num-ber.		Diseases.	Num-ber.
7	Dysentery:		202	Other tumors of the eye and its adnexa:	
	Amebic—			Undetermined	1
	Acute	10			
	Chronic	8	203	Other diseases of the eye and its adnexa:	
	Bacillary, acute	42		Ulcer of cornea	2
8	Erysipelas:		210	Inflammation or ulceration of the ear:	
	Face, acute	1		Otitis media—	
16	Leprosy:			Acute, catarrhal	1
	Tuberculous	1		Chronic	1
17	Malaria:			Suppurative	2
	Estivo-autumnal	16	219	Aortic insufficiency	1
	Tertian	20	223	Mitral incompetency	3
18	Measles	20	242	Arterio-sclerosis	2
21	Mumps	11	251	Hemorrhoids:	
23	Smallpox:			Internal	1
	Varioloid	20		External	1
24	Typhoid fever (abdominal typhus)	1	259	Varicose veins	1
26	Varicella	1	261	Adenitis, nonvenereal:	
30	Alcoholism, acute	9		Inguinal, acute	1
35	Cancer and other malignant tumors of the stomach and liver:		262	Lymphangitis, nonvenereal:	
	Stomach	1		Acute—	
41	Chancroid and chancroidal bubo	1		Arm	1
55	Chancroid	1		Hand	1
55	Gonorrhea, other gonorrheic infections and results:			Leg	3
	Urethritis, acute, anterior	2		Umbilicus	1
	Vaginitis—		276	Coryza	11
	Acute	2	277	Croup, nondiphtheritic	1
	Chronic	1	281	Laryngitis:	
60	Myalgia	6		Acute	8
67	Rheumatism, articular:		284	Nasal fossae and adjacent parts, inflammation of:	
	Acute	8		Rhinitis, hypertrophic, chronic	1
71	Syphilis, acquired, secondary and tertiary:		289	Other diseases of the nose and throat:	
	Tertiary	1		Spur of septum	1
80	Tuberculosis of the lungs	24	291	Bronchitis:	
81	Tuberculosis of the meninges	1		Acute	46
84	Tuberculous adenitis:			Chronic	6
	Cervical, acute	1	292	Bronchopneumonia	13
155	Hysteria	2	295	Hemoptysis	1
160	Neurasthenia	6	300	Pneumonia, lobar	26
162	Sciatica	3	303	Asthma	2
171	Blepharitis	2	309	Pleurisy, fibrinous:	
174	Conjunctivitis:			Acute	1
	Acute	5	320	Dental caries	2
184	Injuries to eye:		334	Pharyngitis	1
	Abrasion	1			
	Burn, cornea	1			
	Hemorrhage, anterior chamber	1			

*Baguio Hospital division—Continued.***HOSPITAL CASES—Continued.**

	Diseases.	Num- ber.		Diseases.	Num- ber.
836	Tonsillitis:		642	Ulcer:	
	Acute.....	1		Chronic, chest.....	1
	Follicular.....	8	646	Other tumors and growths of the skin, nonmalignant:	
839	Other diseases of the mouth, pha- rynix and esophagus:			Mole, thigh, pigmented.....	1
	Abscess, alveolar.....	2	659	Osteomyelitis:	
844	Gastritis:			Jaw, acute, suppurative.....	1
	Acute.....	29	673	Synovitis:	
846	Indigestion.....	2		Knee, acute.....	2
866	Constipation:		679	Rupture of muscle, nontraumatic:	
	Acute.....	2		Leg.....	1
	Chronic.....	7	686	Cord hemorrhage of.....	2
866	Diarrhea:		694	Nurslings cared for in hospital without disease.....	17
	Acute.....	12	711	Abrasions and blisters, mechanical:	
868	Enteritis:			Arm.....	1
	Acute, catarrhal.....	22		Chest.....	1
871	Gastro-enteritis:			Face.....	2
	Acute.....	8		Hand.....	2
874	Hernia, inguinal.....	1		Leg.....	2
891	Rectum, fistula of:			Neck.....	1
	Chronic, suppurative.....	1		Thigh.....	1
894	Sprue.....	1	713	Burns by corrosive substances:	
896	Ankylostoma duodenalis.....	2		Carbolic acid—	
897	Ascaris lumbricoides.....	9		Back.....	1
409	Tenia solium.....	8		Leg.....	1
410	Trichuris trichura.....	4		Hydrochloric acid, leg.....	1
419	Icterus:		714	Burns by fire:	
	Catarrhal, acute.....	1		Hand.....	1
420	Liver, abscess of.....	1	715	Concussion of brain.....	1
423	Liver, cirrhosis of:		717	Contusions:	
	Atrophic.....	1		Arm.....	1
431	Appendicitis and typhlitis:			Back.....	1
	Acute—			Chest.....	6
	Suppurative.....	1		Eye.....	8
	Catarrhal.....	2		Foot.....	2
	Chronic, catarrhal.....	1		Face.....	1
	Subacute.....	1		Hand.....	2
438	Peritonitis, nonpuerperal:			Head.....	2
	Acute.....	2		Leg.....	2
450	Kidney, calculi of.....	1		Neck.....	2
454	Nephritis, interstitial (Bright's disease).....	1		Shoulder.....	4
455	Nephritis, parenchymatous:			Thigh.....	6
	Acute.....	3	718	Crushing:	
470	Cystitis:			Finger.....	3
	Acute.....	8		Leg.....	1
471	Prostate, abscess of.....	1		Thumb.....	1
480	Urethra, stricture of.....	1	719	Dislocations:	
482	Urine, retention of.....	1		Head of radius.....	1
498	Abscess, mammary.....	2		Tarsal and metatarsal, fifth.....	1
519	Dysmenorrhea.....	2	722	Fractures:	
520	Endometritis.....	1		Arm.....	1
547	Pregnancy, vomiting of.....	1		Colla's.....	2
550	Abortion.....	3		Clavicle.....	1
552	Labor, normal.....	11		Humerus, compound.....	1
553	Malpresentation.....	1		Maxillary inferior.....	1
554	Miscarriage.....	2		Metacarpal bone.....	1
555	Perineum, laceration of:			Pelvic.....	1
	With cystocele and rectocele.....	1		Ribs.....	4
560	Prolonged labor.....	1		Skull.....	5
	Instrumental delivery.....	1		Spine.....	1
562	Puerperal septicemia.....	1		Tibia.....	2
602	Nails, ingrowing.....	2		Compound.....	1
604	Phagedena, tropical.....	1	725	Sprains:	
606	Pemphigus contagiosa.....	2		Ulna.....	1
616	Tinea imbricata.....	1		Ankle.....	2
620	Yaws.....	4		Elbow.....	1
				Wrist.....	2
622	Abscess, acute; phlegmon:		729	Traumatism by fall:	
	Abdominal.....	2		Rupture of intestine.....	1
	Foot.....	6	731	Wounds, contused:	
	Hand.....	2		Abdomen.....	1
	Heel.....	1	733	Incised—	
	Neck.....	1		Arm.....	3
	Parotid.....	8		Abdomen.....	1
	Stitch, abdominal wall.....	1		Back.....	1
	Thigh.....	2		Chest.....	1
	Leg.....	1		Face.....	2
626	Carbuncle:			Foot.....	3
	Back.....	2		Forehead.....	1

Baguio Hospital division—Continued.

HOSPITAL CASES—Continued.

	Diseases.	Number.		Diseases.	Number.
731	Wounds, contused—Continued.		734	Wounds, lacerated—Continued.	
733	Incised—Continued.			Thumb.....	1
	Leg.....	3	735	Wounds, punctured:	
	Lip.....	1		Leg.....	3
	Neck.....	2		Thigh.....	1
	Scalp.....	4	743	Convalescent.....	2
	Foot, infected.....	2	746	Malingering.....	1
734	Wounds, lacerated:		747	Under observation.....	6
	Chest.....	1	748	Undetermined.....	1
	Finger.....	3		Total.....	716
	Hand.....	2			
	Leg.....	1			

TABLE OF DEATHS.

Dates.	Nationality.	Adult or child.	Sex.	Cause of death.
1911.				
July 12	Filipino	Adult	Male	Mitral and aortic insufficiency.
July 25	do	do	do	Tuberculosis, pulmonary acute.
July 27	do	do	do	Depressed fracture of skull with intracranial hemorrhage.
Aug. 13	Igorot	do	do	Burns, carbolic acid, external.
Aug. 15	Filipino	do	do	Carcinoma of stomach.
Aug. 19	do	Child	do	Broncho-pneumonia, acute.
Aug. 22	Igorot	Adult	do	Pneumonia, acute, lobar.
Aug. 23	do	do	do	Dysentery, bacillary, acute.
Sept. 12	Filipino	do	do	Incised wounds, abdomen, chest and arm.
Sept. 15	Igorot	do	do	Bacillary dysentery acute.
Oct. 8	Filipino	do	do	Tuberculosis of the lungs.
Oct. 8	Igorot	Child	do	Dysentery, bacillary, acute.
Oct. 28	do	Adult	do	Do.
Nov. 2	do	Child	do	Do.
Nov. 8	Filipino	Adult	do	Tuberculosis of the lungs.
Nov. 18	Igorot	do	do	Crushing of leg.
Dec. 24	American	do	do	Incised wounds, multiple, head and extremities.
1912.				
Jan. 7	Filipino	Adult	Female	Enteritis, acute, catarrhal.
Jan. 24	American	Child	Male	Dysentery, bacillary, acute.
Feb. 18	Igorot	Adult	do	Do.
Feb. 22	American	Child	do	Do.
Feb. 23	do	Adult	do	Nephritis, interstitial, chronic.
Mar. 12	Japanese	do	do	Appendicitis, acute, suppurative, phlebitis, non-puerperal, portal; empyema.
Mar. 15	Filipino	Child	do	Gastro-enteritis, acute.
Mar. 18	American	do	do	Pneumonia, lobar.
Mar. 18	Igorot	Adult	do	Rheumatism, articular, acute; endocarditis, acute.
Mar. 19	do	do	do	Dysentery, bacillary, acute.
Mar. 21	do	Child	do	Do.
Mar. 22	do	Adult	do	Do.
Mar. 22	do	do	do	Do.
Apr. 3	do	do	do	Do.
Apr. 3	do	do	do	Cause unknown.
Apr. 5	Filipino	Child	Female	Broncho-pneumonia.
Apr. 6	Igorot	do	Male	Dysentery, bacillary, acute.
Apr. 12	do	Adult	do	Wound, contused, abdomen.
Apr. 17	American	do	do	Peritonitis, acute; nephritis, acute, parenchymatous; arterio-sclerosis; gastro-enteritis, acute.
May 11	Filipino	Child	Female	Gastro-enteritis, acute.
May 12	do	Adult	Male	Tuberculosis of the lungs.
May 20	do	Child	do	Pneumonia, lobar.
May 27	do	Adult	do	Dysentery, bacillary, acute.
May 28	Igorot	do	do	Peritonitis, non-puerperal, acute; bronchitis, acute.
June 1	Filipino	do	do	Fracture skull, arm and leg.
June 2	Japanese	do	do	Traumatism by fall, rupture of intestine.
June 5	Igorot	do	do	Pneumonia, lobar.
June 7	Filipino	Child	do	Do.
June 15	do	do	do	Broncho-pneumonia.

Baguio Hospital division—Continued.

MEDICAL AND SURGICAL CASES—OUTDOOR CLINIC.

	Diseases.	Number of cases.		Diseases.	Number of cases.
2	Beriberi:		216	Tympanitis	2
	Moist	2	221	Arythmia:	
7	Dysentery:			Tobacco	1
	Amebic—		227	Heart, palpitation of	2
	Acute	6	229	Mitral incompetency	2
	Chronic	6	242	Arterio-sclerosis	5
	Catarrhal, acute	1	251	Hemorrhoids:	
17	Malaria	128		External	19
30	Alcoholism:			Internal	8
	Acute	5	259	Varicose veins	7
37	Cancer and other malignant tumors of the female genital organs:		261	Adenitis, nonvenereal:	
	Carcinoma; cervix uteri	1		Axillary, acute, suppurative	2
41	Chancroid and chancroidal bubo	4		Cervical, acute	4
47	Diabetes mellitus	1		Inguinal	1
54	Gonorrhea and gonorrheal bubo:		262	Lymphangitis, nonvenereal:	
	Urethritis—			Acute—	
	Acute anterior	17		Hand	2
	Chronic posterior	8		Foot	1
55	Gonorrhea, other gonorrheic infections and results:		269	Leg	1
	Vaginitis, acute	1	276	Epistaxis	1
	Epididymitis, acute	1	281	Coryza	187
60	Myalgia	149		Laryngitis:	
67	Rheumatism, articular:			Acute	60
	Acute	34	282	Nasal catarrhal, chronic	14
	Chronic	1	284	Nasal fossae and adjacent parts, inflammation of:	
70	Syphilis, acquired, primary	1		Rhinitis, acute	2
71	Syphilis, acquired, secondary and tertiary:		289	Other diseases of the nose and throat:	
	Secondary	1		Ulcer of septum	1
	Tertiary	6	291	Bronchitis:	
80	Tuberculosis of the lungs	34		Acute	542
82	Tuberculosis of other organs:			Chronic	41
	Kidney	1	292	Broncho-pneumonia	1
84	Tuberculous adenitis:		293	Hemoptysis	5
	Cervical—		303	Asthma	10
	Acute	2	309	Pleurisy, fibrinous:	
	Suppurative	1		Acute	5
88	Vaccinia	4	319	Dentition	1
153	Headache	14	320	Dental caries	209
156	Insomnia	18	322	Epulis	3
158	Migraine	2	330	Gingivitis	11
159	Neuralgia:		334	Pharyngitis:	
	Brachial	1		Acute	30
	Cervical	1		Chronic	6
	Intercostal	5	335	Stomatitis:	
	Trifacial	5		Parasitic, acute	17
160	Neurasthenia	49	336	Tonsillitis:	
161	Neuritis:			Acute	42
	Acute, brachial	2		Follicular—	
162	Sciatica	5		Acute	14
164	Vertigo (unqualified or simple)	1		Chronic	2
170	Astigmatism	1	338	Uvulitis	1
171	Blepharitis	6	339	Other diseases of the mouth, pharynx, and esophagus:	
172	Cataract:			Abscess, alveolar	15
	Senile	1		Sprue	4
174	Conjunctivitis:		340	Anorexia, simple	9
	Acute	88	344	Gastritis:	
	Chronic	6		Acute	142
178	Foreign body in conjunctiva:			Chronic	88
	Bulbar	4	346	Indigestion	198
184	Injuries to eye:		365	Constipation:	
	Foreign body in cornea	5		Acute	296
195	Pterygium	1		Chronic	195
203	Other diseases of the eye and its annexa:		366	Diarrhea:	
	Ulcer cornea	2		Acute	180
200	Styes	12		Chronic	10
204	Abscess of the ear:		371	Gastro-enteritis:	
	External	1		Acute	5
210	Inflammation or ulceration of the ear:		374	Hernia, inguinal	2
	Auditory canal	1	378	Hernia, ventral	1
	Otitis media, acute—		380	Intestines, fistula of:	
	Catarrhal	10		Chronic	1
	Suppurative	7	397	Ascaris lumbricoidis	25
212	Obstruction of auditory canal:		408	Tenia saginata	3
	Wax	8	410	Trichuris trichura	2
213	Otalgia	1	419	Icterus:	
				Catarrhal, acute	5

Baguio Hospital division—Continued.

MEDICAL AND SURGICAL CASES (OUTDOOR CLINIC)—Continued.

	Diseases.	Number of cases.		Diseases.	Number of cases.
481	Appendicitis and typhlitis:		622	Abscess, acute; phlegmon:	
	Acute, catarrhal	3		Arm	4
	Chronic	2		Axillary	2
420	Liver, abscess of	1		Buttocks	1
464	Nephritis, interstitial (Bright's disease)	1		Ischio-rectal	1
458	Nephrolithiasis	1		Face	1
470	Cystitis:			Foot	4
	Acute	19		Finger	9
478	Urethra, inflammation of	8		Hand	7
480	Urethra, stricture of	1		Leg	2
481	Urine, incontinence of	6		Neck	2
482	Urine, retention of	1		Parotid	1
486	Epididymitis	5		Sub-maxillary	1
489	Hydrocele	1		Thigh	1
495	Phimosis	2		Thumb	4
504	Abscess, vaginal	1	626	Carbuncle:	
506	Amenorrhea	5		Acute, neck	1
514	Cervix, ulcer of	1	628	Corns:	
520	Endometritis	1		Acute	6
523	Maastitis	2	629	Cysts:	
524	Menorrhagia	9		Meibomian	1
527	Oophoritis	1		Sebaceous—	
530	Salpingitis, catarrhal	2		Back	2
536	Uterus, displacements of	1		Buttocks	1
541	Vaginitis	8		Ear	3
542	Vulvitis	1		Face	1
547	Pregnancy, vomiting of	3		Forehead	1
549	Other ailments and complications of the gravid state:			Neck	1
	Normal pregnancy; advice asked	4	631	Furuncle:	
550	Abortion	4		Acute—	
555	Perineum, laceration of	1		Axillary	1
579	Acne:			Arm	5
	Vulgaris	16		Abdomen	3
580	Alopecia	9		Back	2
582	Bromidrosis	3		Buttock	15
585	Dermatitis:			Chest	1
	Acute—			Face	17
	Arm	1		Forehead	4
	Buttocks	2		Leg	5
	Leg	3		Neck	5
	Venenata	15		Thigh	2
586	Dhobie Itch	39	639	Neuroma:	
588	Eczema:			Multiple (hand and arms)	1
	Acute—		641	Papilloma:	
	Arm	5		Buttock	1
	Ears	6		Urethra	1
	Face	18	642	Ulcer:	
	Foot	1		Chronic—	
	Hand	7		Foot	1
	Leg	3		Leg	2
	Neck	5	644	Warts:	
	Scalp	1		Face	1
	Chronic—			Hand	1
	Back	4	645	Whitlow and felon	1
593	Herpes	24	649	Caries, skull	1
595	Ichthyosis	4	652	Mastoiditis:	
596	Impetigo	13		Acute, suppurative	1
602	Nails, in-growing	2	659	Osteomyelitis:	
603	Onychia	2		Acute, leg	1
605	Pediculosis:		661	Periostitis:	
	Pubis	6		Acute, leg	1
606	Pemphigus:		667	Arthritis:	
	Contagiosa	33		Acute, maxillary	1
610	Prickly heat	7	671	Synovitis:	
612	Psoriasis	1		Acute, knee	1
614	Scabies	74	679	Rupture, muscle, leg	1
615	Seborrhea	9	685	Cellulitis, umbilical	1
616	Tinea:		692	Lack of care	8
	Circinata	8	711	Abrasions and blisters, mechanical:	
617	Trichophytosis	3		Arm	1
618	Urticaria	5		Back	1
				Buttock	1
				Chest	1
				Face	4
				Foot	14
				Finger	14
				Hand	14
				Knee	5

*Baguio Hospital division—Continued.***MEDICAL AND SURGICAL CASES (OUTDOOR CLINIC)—Continued.**

	Diseases.	Number of cases.		Diseases.	Number of cases.
711	Abrasions and blisters, mechanical—Continued.		731	Wounds, contused:	
	Leg	17		Arm	2
	Penis	1		Ankle	1
	Scalp	1		Back	1
	Thigh	4		Finger	6
	Thumb	6		Foot	6
	Toes	10		Hand	2
	Infected—			Knee	2
	Arm	1		Leg	2
	Buttock	1		Rib	1
	Finger	1		Shoulder	2
	Foot	4		Thigh	1
	Hand	6		Toe	1
	Leg	5		Infected—	
	Shoulder	1		Finger	1
	Toe	1		Head	1
713	Burns by corrosive substances:		733	Leg	1
	Carbolic acid—			Wounds, incised:	
	Leg	3		Arm	4
	Foot	1		Back	2
	Lye, hand	1		Ear	2
	Petroleum, buttock	1		Face	5
714	Burns by fire:			Finger	7
	Leg	1		Forehead	5
	Abdomen	1		Hand	9
	Arm	2		Heel	1
	Buttock	1		Foot	11
	Finger	2		Leg	8
	Foot	1		Scalp	8
	Hand	4		Thumb	4
	Thigh	1		Toe	4
	Toe	1		Infected—	
	Contusions:			Arm	1
	Ankle	2		Face	1
	Arm	5		Finger	9
	Back	1		Foot	10
	Chest	7		Hand	2
	Eye	2		Leg	7
	Face	2		Toe	6
	Foot	2		Chest	1
	Finger	1	734	Wounds, lacerated:	
	Head	1		Finger	6
	Jaw	1		Foot	2
	Knee	1		Forehead	1
	Leg	2		Heel	1
	Neck	2		Knee	2
	Shoulder	2		Leg	2
	Thumb	2		Lip	1
	Toe	1		Thumb	1
718	Crushing:			Toe	2
	Finger	1	735	Wounds, punctured:	
719	Dislocations:			Arm	2
	Elbow	1		Foot	14
722	Fractures:			Hand	8
	Colles	1		Leg	6
	Metacarpal bone	2		Perineum	1
	Rib	1		Thumb	1
	Tibia	1		Infected—	
	Ulna	1		Finger	13
725	Sprains:			Foot	8
	Ankle	14		Hand	2
	Elbow	5		Heel	1
	Finger	5		Leg	4
	Knee	3		Thumb	2
	Thumb	5		Total	3,994
	Wrist	8			

Baguio Hospital division—Continued.

REPORT OF TUBERCULOSIS CASES.

[Classification used is that recommended by the National Association for the Study and Prevention of Tuberculosis.]

Case No.	Race.	Sex.	Age.	Condition on admission.	Stage.	Lung involvement.	Gain in weight.	Complications.	Days treated.	Tuberculin treatment.	Condition on discharge.
146	American	Male	46	Moderately advanced.	II	Left upper lobe; right lower lobe	Kilos 4.1	Heart hypertrophy; arteriosclerosis.	243		Arrested.
106	do	do	36	Incipient	I	Left apex		Pulmonary hemorrhage.	76		Do.
231	do	Female	23	do	I	Right apex	11.2		72		Do.
190	do	Male	30	Moderately advanced.	II	Right lower lobe	1.5		70		Improved.
425	do	do	25	Incipient	I	Right apex	2.5		60		Do.
367	Filipino	Female	20	do	I	do	5.4	Follicular tonsillitis.	83		Arrested.
97	do	Male	24	Moderately advanced.	II	Left upper lobe; left lower lobe		Pulmonary hemorrhage.	568		Improved.
125	do	Female	25	do	II	Right upper lobe; left upper lobe	3.2		517		Do.
123	do	do	38	do	II	Right upper lobe; left apex	1		375		Do.
318	do	do	19	do	II	Right apex; patch in left upper lobe.	5		313		Do.
195	do	do	21	do	II	Left upper lobe; beginning left lower lobe.		Pulmonary hemorrhage, pleurisy fibrinous.	502	Mg. 0.0001 to mg. 5 in 5 months.	Progressive; unimproved.
383	do	Male	30	do	II	Right upper lobe; right lower lobe		Tubercular laryngitis.	351		Do.
519	do	do	17	do	II	Right upper lobe; beginning right lower lobe.	* 4	Tubercular fistula in ano.	385		Do.

Patients treated during the year

Patients remaining in Hospital, July 1, 1912

Cases to be reported on (Americans, 5; Filipinos, 8)

18

5

13

Baguio Hospital division—Continued.

MISCELLANEOUS.

Patients remaining from fiscal year 1911	86
Cases admitted during fiscal year 1912	878
Total number of hospital cases during 1912	611
Total number of hospital cases remaining June 30, 1911	21
Total number of persons accompanying patients in hospital	38
Total number of patients outdoor department, hospital clinic	2,982
Total number of visits to hospital clinic	6,312
Total number of prescription filled	6,964
Total number of surgical dressings, hospital clinic	2,112
Total number of major operations performed	17
Total number of minor operations performed	424
Total number of laboratory examinations	779
Total number of prostitutes examined	261
Total number of Constabulary recruits, etc., examined	33
Total number of vaccinations at hospital	182
Total number of vaccinations in subprovince of Benguet	6,942
Total vaccinations	7,124
Total number of Americans treated in hospital	137
Total number of Filipinos treated in hospital	404
Total number of Japanese treated in hospital	43
Total number of Chinese treated in hospital	7
Total number of Europeans treated in hospital	15
Total number of male patients treated in hospital	473
Total number of female patients treated in hospital	133

CULION LEPRO COLONY DIVISION.

Status.	Americans.		Europeans.		Filipinos.		Chinese.		Others.		Total.
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	
Remaining at last report	1		3		1,430	881	1				2,316
Admitted			1		579	275					855
Born					14	8					22
Discharged					29	1					30
Readmitted					10	5					15
Transferred											
Escaped					58	4					62
Died			1		345	185					531
Remaining	1		3		1,639	971	1				2,615

MARRIAGES.

	Total marriages.			Single males married.			Widowed males married.			Divorced males married.			Nationality of brides.						Relation-ship.	
	Single.	Widowed.	Divorced.	Single.	Widowed.	Divorced.	Single.	Widowed.	Divorced.	Single.	Widowed.	Divorced.	Americans.	Filipinos.	Spaniards.	Other.	Chinese.	All others.	Blood.	Affinity.
Americans	1	1																		
Filipinos	60	55	1		2	2							1	60						
Spaniards																				
Other Europeans																				
Chinese																				
All others																				
Total	61	56	1		2	2							61							

MARRIAGES, BY AGE.

Males.		Females.						
Age.	Num- ber.	To 14 years.	To 20 years.	To 25 years.	To 30 years.	To 40 years.	To 50 years.	Over 50 years.
To 14 years	9	8	1					
To 20 years	26	13	10	3				
To 25 years	11	8	6	2				
To 30 years	11	2	5	1	3			
To 40 years	3			2	1			
To 50 years						1		
Over 50 years	1				1			
Age not stated								
Total	61	26	22	9	4			

COST OF MESSES.

Messes.	Total cost.	Average cost per person per day.
Leper	P125,744.4823	P0.144
Laborers	29,150.6762	.2447
Employees	11,365.681	1.162
Filipino (4 Mo.)	607.7696	.3342

POPULATION.

Number of colonists July 1, 1911	2,317
Number of colonists June 30, 1912	* 2,615
Admitted during the year	874
Admitted October 15, 1911	164
Admitted November 27, 1911	233
Admitted January 17, 1912	40
Admitted February 21, 1912	101
Admitted May 14, 1912	89
Admitted May 25, 1912	196
Total	874

* May 25, 2,656.)

BIRTHS.

Births during the year	23
Conceived in colony	21
Deaths among this number	7
Of this number 13 were legitimate and 10 were illegitimate.	

ESCAPES.

Number escaped during the year	63
Recaptured	37
Transferred to San Lazaro	15
Readmitted from those sent to San Lazaro	2

MARRIAGES.

Couples.	Couples.
July, 1911	10
August, 1911	8
September, 1911	4
October, 1911	2
November, 1911	2
December, 1911	5
January, 1912	8
February, 1912	2
March, 1912	2
April, 1912	2
May, 1912	2
June, 1912	2
Total	61

Of this number 115 were single persons and 7 widowers.

CONTAGIOUS DISEASES.

Varicella	3
Variceloid	1

Culion leper colony division—Continued.

DEATHS.

July, 1911	67	February, 1912	86
August, 1911	46	March, 1912	92
September, 1911	33	April, 1912	25
October, 1911	26	May, 1912	29
November, 1911	24	June, 1912	36
December, 1911	31		
January, 1912	35	Total	531

CAUSES OF DEATH.

Anemia, pernicious	1
Arythmia, cardiac	3
Aspiration pneumonia and senile debility	1
Asthma	1
Beriberi	133
Bronchitis with senile debility	1
Bronchitis with leprous cachexia	1
Broncho-pneumonia	1
Cachexia:	
Leprous	133
Tubercular	5
Cancer of mouth	1
Debility:	
Congenital	4
Senile	27
Diarrhea	1
Dysentery	80
Dysentery and bronchitis	1
Drowning (asphyxiated)	1
Endocarditis	9
Enteritis:	
Acute	10
Gastro	1
Enter-colitis, acute	1
Exhaustion with senile debility	1
Fever, pernicious	3
Gangrene with septicemia	10
Hemoptysis with leprous cachexia	1
Hepatitis	3
Inanition	1
Intoxication, auto	2
Laryngitis with leprous cachexia	1
Malaria	13
Meningitis	2
Nephritis	1
Parotitis, with septicemia	1
Pneumonia	1
Septicemia	5
Tuberculosis	17
Total	531

Above classification furnished by the colony physician.

POPULATION BY NATIONALITY, ETC., JUNE 30, 1912.

	Males.	Females.		Males.	Females.
Americans	1	0	Single	570	275
Europeans	3	0	Married	698	435
Filipinos	1,639	971	Widowed	74	101
Chinese	1	0	Children	302	160
Total	2,615		Total	2,615	

EXPENDITURES.

Gratuities	P23,060.00
Payrolls, etc	80,335.60
Subsistence supplies	166,868.559
Building supplies	120,520.82
Total	389,643.979

NOTE.—To building supplies should be added voucher number B. S. No. 88856-C, dated June 23, 1911. This voucher was sent to Central Office on April 24, 1912, for their information and was not returned as requested.

Statement does not include salaries, etc., paid from Manila office.

AMOUNT OF VACCINE VIRUS DISTRIBUTED BY THE BUREAU OF HEALTH.

	Units.		Units.
Amount on hand July 1, 1911.....	14, 400	Provinces—Continued.	
Received from the Bureau of Science.....	2, 066, 000	Masbate.....	16, 600
Total to be accounted for.....	2, 080, 400	Mindoro.....	5, 000
Distributed as per itemized statement.....	2, 044, 900	Mountain.....	29, 400
Remaining on hand June 30, 1912.....	35, 500	Nueva Ecija.....	17, 400
PLACES AT WHICH VACCINE VIRUS WAS DISTRIBUTED.		Nueva Vizcaya.....	12, 600
Provinces:		Palawan.....	8, 200
Agusan.....	10, 000	Pampanga.....	59, 500
Albay.....	36, 600	Pangasinan.....	80, 000
Ambos Camarines.....	45, 800	Rizal.....	23, 200
Baguio Hospital division.....	5, 800	Samar.....	26, 100
Bataan.....	8, 800	Sorsogon.....	28, 700
Batangas.....	68, 000	Surigao.....	5, 500
Bulacan.....	81, 800	Tarlac.....	5, 800
Cagayan.....	62, 000	Tayabas.....	22, 900
Cavite.....	19, 000	Union.....	119, 900
Cebu.....	400, 000	Zambales.....	19, 800
Culion leper colony division.....	5, 000	Canton, China.....	300
Ilocos Sur.....	99, 800	Total.....	1, 879, 900
Ilocos Norte.....	55, 200	Manila:	
Iloilo.....	300, 600	Health districts.....	148, 500
Isabela.....	11, 000	Other institutions.....	16, 500
Laguna.....	46, 100	Total.....	165, 000
Leyte.....	149, 000	Grand total.....	2, 044, 900

VACCINATIONS.

[Closed July 1, 1912.]

	Vaccina- tions.	Inspec- tions.	Positive.	Negative.
Manila:				
Health district No. 1, Intramuros.....	7, 853	2, 308	963	1, 840
Health district No. 2, Meisic.....	27, 992	11, 514	7, 067	4, 467
Health district No. 4, Sampaloc.....	19, 471	8, 497	3, 996	4, 502
Health district No. 5, Tondo.....	22, 411	4, 522	3, 579	943
Health district No. 6, Paco.....	7, 549	4, 108	2, 515	1, 588
Total.....	85, 276	30, 939	18, 109	12, 830
Provinces:				
Abra.....	15, 133	10, 506	4, 969	5, 537
Agusan.....	1, 685	461	120	341
Albay.....	13, 935	11, 870	8, 728	3, 142
Ambos Camarines.....	15, 187	10, 733	6, 323	4, 410
Bataan.....	5, 092	4, 349	2, 974	1, 375
Bulacan.....	62, 890	44, 343	31, 958	12, 385
Cagayan.....	47, 280	4, 773	1, 089	3, 684
Capiz.....	19, 006	10, 795	6, 742	4, 063
Cavite.....	13, 186	12, 341	9, 014	3, 327
Cebu.....	307, 328	131, 673	98, 303	33, 370
Ilocos Norte.....	28, 216	25, 213	11, 623	13, 590
Ilocos Sur.....	58, 177	48, 095	23, 343	24, 715
Iloilo.....	99, 525	69, 565	51, 606	17, 959
Isabela.....	15, 760	12, 378	9, 868	2, 510
Laguna.....	25, 042	24, 161	14, 914	9, 247
Masbate.....	10, 565	4, 983	4, 568	415
Misamis.....	73, 541	36, 357	16, 411	19, 946
Mountain.....	6, 027	6, 695	5, 084	1, 611
Occidental Negros.....	20, 009	8, 962	5, 761	3, 201
Oriental Negros.....	19, 715	11, 464	5, 787	5, 677
Palawan.....	2, 976	2, 413	1, 850	563
Pampanga.....	42, 596	33, 874	22, 437	11, 437
Pangasinan.....	43, 134	33, 673	20, 491	13, 182
Rizal.....	17, 338	13, 658	8, 471	5, 187
Tarlac.....	8, 571	8, 418	5, 989	2, 429
Union.....	51, 815	46, 211	29, 761	16, 450
Zambales.....	704	543	153	390
Total.....	1, 024, 433	628, 471	408, 338	220, 133
Manila.....	85, 276	30, 939	18, 109	12, 830
Grand total.....	1, 109, 709	659, 410	426, 447	232, 963

SYSTEMATIC VACCINATION.

[Closed July 3, 1912.]

PROVINCE OF LEYTE, FROM MAY 1, 1910, TO APRIL 30, 1912.

Number of vaccinations.....	294,764
Number of successful vaccinations.....	163,045
Successful vaccinations.....	118,510
Unsuccessful vaccinations.....	64,535
Average vaccinations per 1,000 population.....	757.90

REPORT OF SERA.

	Anti-pestic.	Plague prophylactic.	Assorted.
Bottles on hand at the beginning of the year.....	230	1,024	133
Received from the Bureau of Science.....			558
Total to be accounted for.....	230	1,024	691
Issued.....			558
Total bottles remaining at the end of the year.....	230	1,024	133

SMALLPOX AND VARIOLOID, CITY OF MANILA.

Nationalities.	Smallpox.				Varioloid.			
	Cases.		Deaths.		Cases.		Deaths.	
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.
Americans.....					1			
Filipinos.....					390	205		
Spaniards.....						2		
Other Europeans.....					1			
Chinese.....								
All others.....					1			
Total.....					393	207		

Districts and ages.	Smallpox.		Varioloid.	
	Cases.	Deaths.	Cases.	Deaths.
Health districts:				
No. 1, Intramuros.....			82	
No. 2, Meisic.....			197	
No. 4, Sampaloc.....			88	
No. 5, Tondo.....			215	
No. 6, Paco.....			18	
Total.....			600	
Ages:				
Under 1 year.....			21	
1 year to 10 years.....			203	
10 years to 20 years.....			202	
20 years to 30 years.....			127	
30 years to 40 years.....			34	
40 years to 50 years.....			2	
Over 50 years.....			8	
Unknown.....			3	
Total.....			600	

Number of cases found alive: Smallpox, 0; varioloid, 600.

Number of cases found dead: Smallpox, 0; varioloid, 0.

CHOLERA AND PLAGUE, CITY OF MANILA.

Nationalities.	Cholera.				Plague.			
	Cases.		Deaths.		Cases.		Deaths.	
	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.
Americans								
Filipinos		1		1	1	1	1	1
Spaniards								
Other Europeans								
Chinese								
All others								
Total		1		1	1	1	1	1

Districts and ages.	Cholera.		Plague.	
	Cases.	Deaths.	Cases.	Deaths.
Health districts:				
No. 1, Intramuros				
No. 2, Meisic	1	1	1	1
No. 4, Sampaloc				
No. 5, Tondo			1	1
No. 6, Paco				
Total	1	1	2	2
Ages:				
Under 1 year				
1 year to 10 years				
10 years to 20 years			1	1
20 years to 30 years				
30 years to 40 years			1	1
40 years to 50 years	1	1		
Over 50 years				
Unknown				
Total	1	1	2	2

Number of cases found alive: Cholera, 0; plague, 1.

Number of cases found dead: Cholera, 1; plague, 1.

TUBERCULOSIS CASES REPORTED IN MANILA.

Nationalities.	Health districts.										Total.
	No. 1.		No. 2.		No. 4.		No. 5.		No. 6.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Americans	1										1
Filipinos	50	16	33	21	19	15	44	35	14	11	258
Spaniards											
Other Europeans											
Chinese			4								4
All others	1		1								2
Total	52	16	38	21	19	15	44	35	14	11	265

* Incomplete.

Also reported 39 provincial cases.

REPORT OF EXAMINATION OF SCHOOL CHILDREN.

Diseases found.	Boys.	Girls.	Disposition of cases.				Total.
			Exclud- ed.	Sent to dispen- sary.	No treat- ment.	Refused treat- ment.	
Excluded from school:							
Pertussis.....							
Mumps.....	3		3	2	1		3
Tuberculosis.....	47	52	4	99			99
Measles.....							
Contagious eye cases except trachoma.....							
Pediculosis with live pediculi.....		3	3	3			3
Scabies.....	76	44	3	115	5		120
Contagious skin cases.....							
Favus.....	8	5	4	13			13
Other diseases.....							
Ordered for treatment:							
Pediculosis no live pediculi.....	12	32		44			44
Adenoids.....	52	9		50	11		61
Tonsils hypertrophied.....	542	296		93	745		838
Conjunctivitis, acute.....	101	48		138	11		149
Trachoma.....	223	82		305			305
Myopia.....	72	43		102	13		115
Blind one eye.....	10	3		3	10		13
Dermoid cyst, lid.....	7	1		7	1		8
Iritis.....	1	1		2			2
Dacryocystitis.....		1		1			1
Strabismus.....	12	4			15		16
Styes.....	1	1		2			2
Tumors (congenital).....		1			1		1
Ulcers, cornea.....		1		1			1
Defective hearing.....	191	74		124	131		255
Deaf, one ear.....	15	4		19			19
Eczema, ear.....	2			2			2
Otitis media.....		1		1			1
Chorea.....	1			1			1
Adenitis, tubercular.....	24	21		15	30		45
Tinea.....	373	104		185	292		477
Dental caries.....	1,190	796		162	1,824		1,986
Deformities.....	15	6		4	17		21
Bronchitis.....	265	214		358	121		479
Goutre.....	1			1			1
Fracture, arm.....	1			1			1
Malaria.....	2			2			2
Pleurisy.....	2	1		2	1		3
Pompholyx.....		1		1			1
Valvular lesions.....	9	3		10	2		12
Number of vaccinations required.....	384	142					526
Number of vaccinations made.....							
Total.....	3,642	1,994	17	1,879	3,231		5,636

Total number of children examined, 10,640.

CHOLERA IN THE PROVINCES.

Towns.	Cases.	Deaths.	Mortality.
			<i>Per cent.</i>
Laguna: Calamba.....	1		
La Union:			
Bacnotan.....	3	2	
Luna.....	19	17	
San Juan.....	3	3	
San Fernando.....	23	20	
Total.....	48	42	87.50
Grand total.....	49	42	85.71

SMALLPOX AND VARIOLOID IN THE PROVINCES, DURING THE SECOND, THIRD, AND FOURTH QUARTERS OF 1911, FIRST AND SECOND QUARTERS OF 1912.

[Closed September 3, 1912.]

Provinces.	1911						1912						Total.	
	Second quarter.		Third quarter.		Fourth quarter.		First quarter.		Second quarter.					
	Cases reported.	Deaths.	Cases reported.	Deaths.	Cases reported.	Deaths.	Cases reported.	Deaths.	Cases reported.	Deaths.	Cases reported.	Deaths.		
Abra														
Agusan														
Albay														
Ambos Camarines									X	X				
Antique									X	X				
Bataan														
Batanes									X	X				
Batangas		1						2					3	
Bohol	23	1			8		26	3	19	1	76		8	
Bulacan														
Cagayan								1	X	X			1	
Capiz		4		2		2	X	X	X	X			8	
Cavite														
Cebu		154		143	123	123		99	30	30	153		549	
Ilocos Norte		6											6	
Ilocos Sur														
Iloilo		13							X	X			13	
Isabela									X	X				
Laguna														
Leyte	191	55	207	62	308	73	659	110	X	X	1,365		290	
Misamis									X	X				
Nueva Ecija									X	X				
Nueva Vizcaya									X	X				
Oriental Negros						5		1	X	X			6	
Occidental Negros	32	32		7		8		1			32		43	
Pampanga														
Pangasinan														
Rizal										5			5	
Romblon							X	X	X	X				
Samar									X	X				
Surigao														
Tarlac				32									32	
Tayabas										1			1	
Union														
Zambales							X	X						
Total	246	266	207	236	439	206	685	217	49	37	1,626		962	

VARIOLOID.

	Cases reported.	Deaths.
Second quarter, 1911	70	0
Third quarter, 1911	28	0
Fourth quarter, 1911	0	0
First quarter, 1912	28	0
Second quarter, 1912	0	0
Total	126	0

NOTE.—There were 224 cases in June and 213 cases in July, 1912 of smallpox, in the province of Leyte.

MORTALITY AMONG GOVERNMENT EMPLOYEES.

[Closed August 5, 1912.]

	Americans.	Filipinos.
Average number of employees	2,852	7,068
Number of deaths:		
From illness	16	24
From violence	6	2
Total	22	26
Deaths from illness:		
Average years of service	7.96	4.21
Average age at death	39	38
Annual death rate per thousand	5.61	3.39
Deaths from violence:		
Average years of service	9.09	5.60
Average age at death	35	28
Annual death rate per thousand	2.10	0.28
All deaths:		
Average years of service	7.74	4.21
Average age at death	38	31
Annual death rate per thousand	7.71	3.68
Both nationalities:		
Population	9,915	
Number of deaths	48	
Average years of service	6.02	
Average age at death	35	
Annual death rate per thousand	4.84	

All deceased are males except one Filipina.

GENERAL RETURN OF BIRTHS AND DEATHS IN THE VARIOUS PROVINCES OF THE PHILIPPINE ISLANDS, DURING THE CALENDAR YEAR 1911.

Provinces.	Average of population.	Births.	Annual birth rate per 1,000.	Deaths.											
				From 0 to 1 year.	From 1 to 2 years.	From 2 to 5 years.	From 5 to 10 years.	From 10 to 20 years.	From 20 to 30 years.	From 30 to 40 years.	From 40 to 50 years.	From 50 to 60 years.	Over 60 years.	Unknown.	
Abra	60,392	2,194	36.32	243	66	79	55	55	100	112	87	62	183	2	
Agusan	18,567	537	28.92	72	27	26	16	20	24	16	18	10	22	1	
Albay	247,067	11,348	45.93	1,977	890	1,215	524	460	496	352	369	359	956	27	
Ambos Camarines	246,453	10,156	41.20	1,560	612	807	295	342	381	345	316	319	692		
Antique	133,003	4,609	34.65	612	292	409	122	104	131	134	125	119	293		
Bataan	47,230	2,326	49.24	612	175	166	62	90	145	108	73	71	152		
Batanes	8,068	329	39.78	76	16	11	3	4	9	12	13	10	35		
Batangas	301,811	14,959	49.56	2,957	770	845	228	296	575	430	384	361	736	548	
Bohol	269,223	12,614	46.85	2,092	748	915	510	525	474	335	282	323	1,135	39	
Bulacan	225,757	9,812	43.46	3,209	662	774	257	234	441	451	425	304	1,066	8	
Cagayan	137,010	5,773	42.13	1,215	444	622	266	208	291	306	276	251	524	1	
Capiz	220,855	8,564	38.78	1,362	522	742	385	243	318	297	284	237	702	32	
Cavite	137,520	5,837	42.44	1,709	492	526	129	165	318	264	221	223	556	1	
Cebu	728,562	32,275	44.29	4,559	1,942	2,357	1,275	894	1,024	764	767	754	1,728	10	
Ilocos Norte	170,696	8,483	49.69	1,352	553	669	277	248	378	252	240	231	741	8	
Ilocos Sur	208,487	8,704	42.77	1,546	357	383	149	215	349	335	231	189	598	7	
Iloilo	406,854	16,992	41.76	3,233	1,547	2,270	839	652	626	609	545	497	1,034	27	
Isabela	72,998	2,901	39.74	539	254	315	155	145	176	181	139	107	220	1	
Laguna	148,430	7,699	51.86	1,997	442	424	185	245	446	339	339	301	574	11	
Leyte	488,451	18,758	48.40	2,259	909	1,274	852	785	822	564	466	470	901	205	
Misamis	132,601	5,526	41.67	1,125	311	382	222	230	296	161	170	138	318	3	
Nueva Ecija	19,907	797	40.03	183	63	81	41	55	105	83	51	45	90		
Nueva Vizcaya	132,999	5,883	44.23	1,365	454	523	179	207	318	256	250	198	507	42	
Occidental Negros	304,668	10,357	33.99	2,134	1,065	1,408	467	630	456	422	353	325	725	24	
Oriental Negros	184,889	7,762	41.98	1,276	618	764	403	315	371	294	278	231	581	3	
Pampanga	225,113	11,534	51.23	3,184	760	821	229	198	394	396	329	280	816	4	
Pangasinan	441,816	22,410	50.72	3,865	1,513	2,018	660	659	974	831	665	612	1,867	14	
Rizal	152,085	8,028	52.93	2,365	502	435	121	154	328	328	273	238	683	42	
Romblon	55,559	2,200	39.59	239	118	147	83	70	109	76	82	98	153	2	
Samar	233,818	7,444	31.83	869	226	255	161	297	280	206	211	214	412	115	
Surigao	83,946	2,047	24.38	311	102	136	72	78	80	72	51	63	116	8	
Tarlac	139,971	7,105	50.76	1,548	545	630	207	176	317	248	226	159	468		
Tayabas	201,936	8,605	42.61	1,752	413	495	249	321	504	440	353	335	687	4	
Union	128,895	6,222	48.27	896	382	455	168	167	264	180	147	125	548	8	
Zambales	62,045	2,479	39.95	464	226	302	78	78	133	133	103	78	184	20	

General return of births and deaths, etc.—Continued.

Causes of death.	Abra.	Agusan	Albay.	Ambos Cama- rines.	Anti- que.	Bata- an.	Bata- nes.
Typhoid fever (abdominal typhus)	21	30	3	14	6	35	-----
Malaria fever	408	57	750	671	325	199	6
Malarial cachexia	8	10	27	31	4	67	4
Smallpox	-----	-----	-----	-----	-----	-----	-----
Whooping cough	45	7	96	86	14	2	-----
Cholera, Asiatic	-----	-----	59	-----	-----	-----	-----
Dysentery	11	25	1,207	808	380	184	2
Beriberi	-----	18	57	88	-----	10	2
Tuberculosis of the lungs	109	7	506	529	392	179	9
Tuberculosis of other organs	4	3	109	46	13	12	1
Cancer and other malignant tumors	4	1	17	17	-----	5	-----
Congestion and hemorrhage of the brain	-----	2	16	7	1	7	-----
Convulsions of children	22	26	916	529	122	351	9
Acute bronchitis	7	5	410	124	-----	24	-----
Diarrhea and enteritis (under 2 years)	14	4	143	33	100	17	11
Chronic diarrhea and enteritis	2	-----	26	26	79	10	2
Diarrhea and enteritis (2 years and over)	13	4	125	61	92	49	5
Diseases of the puerperal state	18	2	192	145	20	31	6
Violence:	-----	-----	-----	-----	-----	-----	-----
Suicide	2	1	4	6	-----	3	-----
Not suicide	9	-----	53	21	13	7	1
Other diseases	347	55	2,582	2,454	780	512	180
Total	1,044	252	7,598	5,696	2,341	1,654	189
Males	552	143	3,962	2,941	1,176	879	85
Females	492	109	3,636	2,755	1,165	775	104
Annual death rate per 1,000	17.28	13.57	80.75	23.11	17.60	35.02	23.42
A CLASSIFIED REPORT OF ALL DEATHS OCCURRING.							
Males:	-----	-----	-----	-----	-----	-----	-----
Married	198	30	725	560	213	175	24
Widowers	48	10	319	239	123	65	5
Single	46	17	381	273	77	66	-----
Boys	249	86	2,535	1,804	763	564	56
Condition not stated	11	-----	2	15	-----	9	-----
Females:	-----	-----	-----	-----	-----	-----	-----
Married	161	23	667	549	219	172	19
Widows	98	14	491	479	170	105	25
Single	82	10	329	243	95	45	7
Girls	202	57	2,149	1,480	681	452	53
Condition not stated	4	5	-----	4	-----	1	-----

Causes of death.	Batan- gas.	Bohol.	Bula- can.	Caga- yan.	Capiz.	Cavite.	Cebu.
Typhoid fever (abdominal typhus)	68	31	102	3	28	43	356
Malaria fever	1,282	867	424	892	592	649	1,906
Malarial cachexia	395	118	22	906	123	296	53
Smallpox	1	3	1	-----	19	-----	716
Whooping cough	40	266	28	8	219	31	456
Cholera asiatic	-----	-----	15	-----	-----	1	-----
Dysentery	568	276	368	321	710	209	2,198
Beriberi	117	63	278	72	59	109	700
Tuberculosis of the lungs	749	464	1,091	272	486	298	382
Tuberculosis of other organs	59	98	142	121	81	59	458
Cancer and other malignant tumors	18	71	19	1	15	26	165
Congestion and hemorrhage of the brain	21	12	59	4	9	33	19
Convulsions of children	1,386	351	2,602	483	246	1,097	318
Acute bronchitis	233	175	175	10	165	106	67
Diarrhea and enteritis (under 2 years)	58	19	50	15	49	132	191
Chronic diarrhea and enteritis	81	3	75	10	27	120	102
Diarrhea and enteritis (2 years and over)	74	12	75	85	122	147	246
Diseases of the puerperal state	142	102	91	58	82	65	236
Violence:	-----	-----	-----	-----	-----	-----	-----
Suicide	12	18	5	12	12	9	48
Not suicide	630	37	55	28	80	15	123
Other diseases	2,216	4,392	2,149	1,153	2,060	1,159	7,345
Total	8,130	7,378	7,826	4,404	5,174	4,604	16,074
Males	4,389	3,775	4,081	2,393	2,564	2,473	8,571
Females	3,741	3,603	3,745	2,011	2,610	2,131	7,503
Annual death rate per 1,000	26.93	27.74	34.66	32.14	23.42	33.47	22.6

General return of births and deaths, etc.—Continued.

Causes of death.	Batan- gas.	Bohol.	Bula- can.	Caga- yan.	Capiz.	Cavite.	Cebu.
A CLASSIFIED REPORT OF ALL DEATHS OCCURRING.							
Males:							
Married	779	684	783	590	505	476	2,796
Widowers	279	268	356	249	254	209	861
Single	234	386	232	146	196	155	686
Boys	2,669	2,419	2,608	1,406	1,614	1,633	4,223
Condition not stated	428	18	42		5		4
Females:							
Married	745	683	720	418	426	452	1,809
Widows	493	489	580	329	484	342	637
Single	213	475	188	102	264	99	687
Girls	2,170	1,982	2,273	1,162	1,435	1,237	4,680
Condition not stated	120	24	34		1	2	

Causes of death.	Ilocos Norte.	Ilocos Sur.	Iloilo	Isabela.	La- guna.	Leyte.	Misa- mis.
Typhoid fever (abdominal typhus)			60	4	131	14	155
Malarial fever	1,342	886	1,413	493	797	875	532
Malarial cachexia			909	84	134	182	50
Smallpox	6		30	1		214	
Whooping cough	60	41	351	19	56	38	57
Cholera, Asiatic		8					
Dysentery	569	240	1,894	175	255	1,196	440
Beriberi	11	64	50	47	56	251	118
Tuberculosis of the lungs	504	401	1,484	223	681	576	225
Tuberculosis of other organs		1	122	14	65	48	71
Cancer and other malignant tumors	2		31	2	19	27	19
Congestion and hemorrhage of the brain		5	38	1	32	6	6
Convulsions of children	298	212	2,019	121	1,063	740	157
Acute bronchitis	21	63	236	58	100	152	
Diarrhea and enteritis (under 2 years)	129	81	198	6	72	144	38
Chronic diarrhea and enteritis	74	43	125	4	77	106	12
Diarrhea and enteritis (2 years and over)	106	75	357	26	70	268	9
Diseases of the puerperal state	75	139	107	21	90	167	64
Violence:							
Suicide		13	11	2	13	20	10
Not suicide	6	12	41	21	37	66	15
Other diseases	1,746	2,070	2,393	910	1,535	4,415	1,868
Total	4,949	4,349	11,879	2,232	5,308	9,507	3,856
Males	2,543	2,316	6,304	1,267	2,791	5,115	1,809
Females	2,406	2,033	5,575	965	2,512	4,392	1,547
Annual death rate per 1,000	28.99	21.37	29.19	30.57	35.72	19.46	25.30

A CLASSIFIED REPORT OF ALL DEATHS OCCURRING.							
Males:							
Married	509	581	904	333	625	971	356
Widowers	261	204	539	111	227	399	116
Single	194	161	393	93	179	513	151
Boys	1,578	1,368	4,439	729	1,678	3,069	1,163
Condition not stated	1	2	29	1	82	143	23
Females:							
Married	446	470	801	234	652	874	307
Widows	384	318	765	141	889	522	186
Single	191	205	343	41	158	378	121
Girls	1,385	1,040	3,656	534	1,275	2,502	917
Condition not stated			10	15	38	116	16

Causes of death.	Nueva Ecija.	Nueva Vis- caya.	Occi- dental Negros.	Orien- tal Negros.	Pam- panga.	Panga- sinan.	Rizal.
Typhoid fever (abdominal typhus)	12	12	20	1	215	169	96
Malarial fever	229	622	946	995	737	2,258	256
Malarial cachexia	9	118	195	47	373	276	133
Smallpox			12	157			
Whooping cough	8	55	118	233	33	86	26
Cholera, asiatic							
Dysentery	28	417	1,502	559	304	951	218
Beriberi	8		70	131	145	56	329
Tuberculosis of the lungs	98	428	850	217	957	1,513	413
Tuberculosis of other organs	12	23	30	231	35	147	156
Cancer and other malignant tumors	1		15	28	20	81	29
Congestion and hemorrhage of the brain	1	3	14	4	87	42	60

General return of births and deaths, etc.—Continued.

Causes of death.	Nueva Ecija.	Nueva Vizcaya.	Occidental Negros.	Oriental Negros.	Pampanga.	Pangasinan.	Rizal.
Convulsions of children	99	905	1,254	197	1,885	2,079	1,437
Acute bronchitis	12	64	7	57	136	260	182
Diarrhea and enteritis (under 2 years)	4	158	77	72	73	55	98
Chronic diarrhea and enteritis	8	94	44	16	50	49	95
Diarrhea and enteritis (2 years and over)	5	105	230	100	41	149	115
Diseases of the puerperal state	25	64	67	47	99	230	63
Violence:							
Suicide	1		8	22	4	14	5
Not suicide	2	5	55	23	40	141	42
Other diseases	240	1,221	2,655	1,997	2,216	5,167	1,721
Total	797	4,294	8,169	5,134	7,400	13,678	5,469
Males	450	2,320	4,362	2,750	3,927	7,115	2,943
Females	347	1,974	3,807	2,384	3,473	6,563	2,526
Annual death rate per 1,000	40.08	32.28	26.81	27.76	32.87	30.95	35.96
A CLASSIFIED REPORT OF ALL DEATHS OCCURRING.							
Males:							
Married	156	492	688	483	697	1,497	556
Widowers	41	217	391	214	299	713	249
Single	35	163	418	262	233	337	172
Boys	205	1,420	2,835	1,723	2,695	4,551	1,953
Condition not stated	13	28	30	63	3	17	11
Females:							
Married	113	444	680	425	586	1,551	514
Widows	60	284	520	350	431	978	388
Single	15	108	235	227	138	304	89
Girls	156	1,121	2,834	1,373	2,318	3,720	1,582
Condition not stated	3	22	38	9		10	3

Causes of death.	Romblon.	Samar.	Surigao.	Tarlac.	Tayabas.	Union.	Zambales.
Typhoid fever (abdominal typhus)	8	25	2	46	92	86	33
Malarial fever	131	381	167	621	467	437	210
Malarial cachexia	33	94	7	384	263	196	44
Smallpox				32			
Whooping cough	7	63		44	88	22	12
Cholera, Asiatic					3	42	
Dysentery	45	223	158	240	304	365	212
Beriberi	33	109	7	40	139	12	14
Tuberculosis of the lungs	89	105	30	509	770	193	248
Tuberculosis of other organs	13	53	7	32	95	38	117
Cancer and other malignant tumors	1	22	2	1	16	9	6
Congestion and hemorrhage of the brain	26	4		19	53	9	
Convulsions of children	38	255	33	793	464	497	134
Acute bronchitis	31	85	54	51	174	65	
Diarrhea and enteritis (under 2 years)	6	33	11	24	45	6	5
Chronic diarrhea and enteritis	9	10	14	4	47	12	9
Diarrhea and enteritis (2 years and over)	5	25	12	27	68	49	72
Disease of the puerperal state	24	83	20	67	127	56	32
Violence:							
Suicide		5	1	9	7	13	2
Not suicide	7	33	7	30	24	31	5
Other diseases	666	1,640	552	1,551	2,308	1,197	659
Total	1,172	3,248	1,084	4,524	5,553	3,335	1,808
Males	618	1,692	622	2,437	2,991	1,695	940
Females	544	1,556	462	2,087	2,562	1,640	868
Annual death rate per 1,000	21.09	13.89	12.91	32.32	27.49	25.87	29.14
A CLASSIFIED REPORT OF ALL DEATHS OCCURRING.							
Males:							
Married	161	393	124	437	825	349	178
Widowers	93	197	53	202	231	149	77
Single	66	174	49	121	249	124	64
Boys	296	847	396	1,677	1,666	1,070	596
Condition not stated	2	81			20	8	25
Females:							
Married	113	399	107	436	746	392	209
Widow	117	240	72	284	383	274	115
Single	48	142	33	81	139	127	40
Girls	274	683	250	1,185	1,292	832	577
Condition not stated	2	92		1	2	15	27

WELLS COMPLETED DURING THE FISCAL YEAR BY THE BUREAU OF PUBLIC WORKS.

Provinces and towns.	Num-ber.	Depth in feet.	Flows gallons per minute.	Pumps gallons per minute.	Suc-cessful.	Unsuc-cessful.	Why abandoned.
Batangas:							
Nasugbu	3	660	5	6	1		
.....	4	155		40	1		
Balayan	4	781		25	1		
Lipa	1	164		80	1		
.....	2	191		80	1		
Cebu:							
Mabolo Estate	1	614		100	1		
.....	2	835		35	1		
Argao	1	468	5		1		
Cagayan:							
Tuguegarao	1	737		35	1		
Aparri	2	698				1	Gravel.
Ambos Camarines:							
.....	2	70		20	1		
.....	3	48		20	1		
Indan	4	48		20	1		
.....	5	48		20	1		
.....	6	48		20	1		
.....	7	78		20	1		
Basud		100		13	1		
.....	1	48		15	1		
Sagnay	2	48		18	1		
.....	3	48		12	1		
.....	4	48		20	1		
.....	6	48		10	1		
Daet	7	44		20	1		
.....	8	38		6	1		
Labo	2	72		15	1		
Indan	1	125				1	Hard sandstone.
Labo	1					1	No water.
.....	3					1	Rock.
Occidental Negros: San Carlos (Tabacalera)	1	68		15	1		
.....	2	80		15	1		
.....	3	186		15	1		
Oriental Negros: Lazi		188				1	Pulled pipe.
Albay: East Batan Coal Mining Co.		236				1	Do.
Cavite: Santa Cruz de Malabon	3	300		30	1		
Tayabas:							
Pagbilao		880		20	1		
Atimonan	1	850		10	1		
Iloilo: Janiuay		1,760				1	Salt water.
Bulacan:							
.....	3	536	15	30	1		
Baliuag	4	407	40		1		
.....	5	590	12		1		
Santa Maria		555	100		1		
Nueva Ecija:							
Cabanatuan	5	620	75		1		
Nampicuan		835		15	1		
.....	2	70		17	1		
.....	3	66		20	1		
Talavera	4	40		30	1		
.....	5	70		30	1		
.....	6	97		20	1		
Aliaga	1	157		30	1		
.....	2	176		30	1		
.....	1	120		25	1		
.....	2	29		18	1		
Nueva Vizcaya: Bayombong	3	30		14	1		
.....	4	27		16	1		
.....	5	137				1	Rig turned over to provincial treasurer.
Leyte:							
.....	2	54		12	1		
.....	3	62		12	1		
Malitbog	4	51		12	1		
.....	1	109				1	No water.
Liloan		58				1	No crew.
Rizal:							
Alabang	5	1,014		30	1		
.....	1	807		25	1		
Antipolo	2	257		50	1		
.....	3	340		25	1		
.....	2	320		50	1		
Taytay	3	795		50	1		
.....	1	465	7		1		
Las Piñas	2	415	30		1		

*Wells completed during the fiscal year by the Bureau of
Public Works—Continued.*

Provinces and towns.	Num-ber.	Depth in feet.	Flows gallons per minute.	Pumps gallons per minute.	Suc-cessful.	Unsuc-cessful.	Why abandoned.
Rizal—Continued.							
Taguig	1	488		30	1		
	2	396		35	1		
Parañaque	2	485	12		1		
	3	300		30	1		
Tanay	1	63		12	1		
	2	160		20	1		
	3	112		12	1		
Montalban	7	40		14	1		
Tanay	4	410				1	Hard rock.
Morong	1	153				1	Sandstone.
Pillilla	1	93				1	Hard rock.
Laguna:							
San Pedro Tunasan		355	16	180	1		
	1	305	11	150	1		
Bifan	2	260	29	150	1		
Santa Rosa		210	50		1		
Cabuyao	1	137	100		1		
	2	132	120		1		
Calamba		361		100	1		
Alaminos		945		50	1		
Pangasinan:							
Malasiqui	2	310		250	1		
San Fabian		115	160		1		
Mangaldan		150	75		1		
Binmaley		392	35	70	1		
Malasiqui	1	900				1	Salt water.
	1	1,200				1	Do.
Alaminos	2	500				1	Do.
Samar:							
Catbalogan	1	794		30	1		
Wright	3	740				1	Do.
Ilocos Sur:							
Vigan	4	4,016				1	Slate.
Santo Domingo		795				1	Do.
Tarlac:							
San Miguel (Tabacalera)	1	109		20	1		Gravel.
	2	79				1	Do.
	3	82				1	Rock.
Camiling	1	198				1	
Total	102	32,403	897	1,569	80	22	

WELLS COMPLETED DURING THE FISCAL YEAR 1912 BY PROVINCIAL JET RIGS.

Province and town.	Num-ber.	Depth in feet.	Flows gallons per minute.	Pumps gallons per minute.	Suc-cessful.
Bulacan:					
Obando (barrio Pacó)		151	12		1
San Miguel (barrio Camias)		360	3		1
Calumpit (barrio Calizon)		317	5		1
Bocaue (barrio Lolomboy)		178	2		1
Hagonoy—					
Barrio San José		257	40		1
Barrio Santa Mónica		354	15		1
San Miguel (Santa Rita)		266		13	1
Calumpit (barrio Calumpang)		267	21		1
Obando (barrio Quibadia)		239		25	1
San Miguel de Mayumo		105	7		1
Malolos (barrio Santo Rosario)		196	17		1
Paombong (barrio Masucol)		295	15		1
Obando (barrio Quibadia)		255		5	1
Hagonoy (barrio San Isidro)		344	50		1
Bataan:					
Balanga—					
Cupang		107	20		1
Catanning		105	20		1
Missouri Street		103	9		1
Abucay—					
Calaylayan		110	2		1
Gabon		120	4		1

*Well completed during the fiscal year 1912 by the Provincial
jet rigs—Continued.*

Province and town.	Num- ber.	Depth in feet.	Flows gallons per minute.	Pumps gallons per minute.	Suc- cessful.
Bataan—Continued.					
Samal—					
Calaguiman		60	9		1
Ibaba		60	5		1
San Juan		60	14		1
Orani—					
Pantalan		222	45		1
Parang		200	20		1
Orani (Santa Cruz)		220	18		1
Parang		220	45		1
Hermosa		200	50		1
Dinalupihan—					
San José		100	42		1
Luacan		152	32		1
Burgos		150	7		1
Pampanga:					
San Fernando—					
San Vicente		220	35		1
San Pedro		260	5		1
Lubao—					
Bangkal		200	5		1
Sinubli		180	5		1
Intermediate School		190	5		1
Santa Bárbara		180	5		1
San Nicolas		160	5		1
San Antonio		80	5		1
Concepcion		180	5		1
San Vicente		180	5		1
Tarlac:					
Gerona		275		15	1
Tarlac		75		16	1
Concepción		292		15	1
San Manuel		300		17	1
Victoria—					
San Nicolas		149	32		1
Palacpalac		126	103		1
Moncada—					
Arifgin		130	10		1
Pedro		310	10		1
Balayan		166	11		1
San Julian		200	25		1
Victoria (Maluid)		356	2		1
Moncada (Capauayan)		250	5		1
Victoria (Balbaloto)		216	80		1
Moncada (Calamay)		110	20		1
Victoria—					
San Andres		233	11		1
Santa Lucia		187	8		1
Moncada (Rizal)		310	10		1
Pura—					
Población		229	15		1
Matindig		226	13		1
Buena Vista		226	20		1
Paniqui—					
South		215	10		1
West		178	10		1
Total	62	8,362	1,004	106	62

The following statement shows the expenditures made during the fiscal year 1912 chargeable against the appropriation for the Bureau of Health during that period:

Amount allotted for the year.....	P1,417,000.00
Amount carried from last year's appropriation.....	176,352.22
Amount restored during the year.....	4,849.01

Total	1,597,701.23
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Expenditures chargeable are as follows:

GENERAL

Salaries and wages:	
General office	P7,560.00
Clerical division	30,295.55
Statistical division	12,509.63
Engineering division	22,507.97
Property division	9,028.00
Central Free Dispensary	3,336.00
Station A	20,847.17
Station C	14,763.96
Station I	8,610.47
Station J	10,515.99
Station L	7,425.66
Disinfection division	12,428.22
San Juan Tuberculosis Hos- pital	1,763.33
Board of examiners	895.00
Cebu Hospital	544.00
Iloilo Hospital	3,000.00
Commutation of leave	19,159.61
Incidental	1,022.95
Stationery and office supplies:	
General	2,857.99
Sanitary stations	374.87
Transportation:	
Engineering division	1,636.35
Disinfection division	2,076.80
Station A	909.90
Station C	1,102.40
Station I	808.00
Station J	408.20
Station L	800.80
Incidentals	6,050.19
Postage and telegrams	2,821.60
Cablegrams	150.74
Printing and binding	19,544.04
Library, periodicals	125.12
Street-car tickets	3,380.00
Hospital of San José	44,138.25
Colegio de Santa Isabel	2,682.61
Asilo de San Vicente de Paul	3,600.00
Rents:	
Sanitary stations	240.00
Post-office box	32.00
Transportation of employees to and from the United States	6,217.50
Traveling expenses and per diems of employees	5,087.78
Disinfectants	12,586.17
Central Free Dispensary:	
Medicines	3,953.18
Incidentals	194.11
Medicines and medical supplies for indigent persons	
	9,608.16
Plannel for covering infants	100.10
San Juan Tuberculosis Hospital:	
Medicines	1,234.64
Disinfectants	4.47
Tuberculosis Free Dispensary—	
Medicines	979.61
Freight	2,818.79
Iloilo Hospital—Fees	290.50
Cebu Hospital—Miscellaneous	1,849.57
Rents, telephone:	
General	296.00
Sanitary stations	506.52
Repairs to furniture and office	4,614.63
Miscellaneous equipment	28,436.37
Equipment, Cebu Hospital	11,174.36
Miscellaneous supplies, stock	(95,127.13)

GENERAL—continued.

Sibul Springs:	
Salaries and wages.....	P1,935.00
Medicines and miscellaneous...	299.96
Traveling expenses	74.98
Equipment and Improvement...	238.51
Total	276,316.49

INSPECTION DIVISION.

Salaries and wages:	
Medical inspectors	68,685.24
District health officers	(11,620.80)
Sanitary inspectors	6,028.66
Employees	3,456.68
Chauffeurs	1,713.68
Transportation	7,808.20
Photographs	281.40
Serum antiplague	763.28
Sera, miscellaneous	3.94
Incidentals	10.27
Traveling expenses:	
Medical inspectors	967.76
District health officers	7,745.37
Sanitary inspectors	1,627.56
Repairs auto	1,814.60
Equipment	1,074.34
Total	84,858.13

VACCINATION DIVISION.

Salaries and wages.....	19,939.89
Traveling expenses	4,552.85
Antiseptic supplies and dressings..	577.12
Vaccine virus	18,420.00
Ice for virus.....	409.43
Total	49,999.34

SAN LAZARO HOSPITAL.

Salaries and wages	37,487.96
Subsistence supplies	49,320.48
Light	5,592.90
Rent of telephones	218.40
Forage and horseshoeing	10.60
Transportation	49.30
Clothing, lepers	169.20
Bedding, insane	140.00
Cigars and cigarettes	120.00
Soap	361.95
Laundry allowances	331.17
Gratuity to lepers	1,872.56
Office supplies	109.07
Incidentals	8,298.89
Medicines, medical, and surgical supplies	7,963.07
Repairs	3,725.06
Equipment	2,627.69

PHILIPPINE GENERAL HOSPITAL

Salaries and wages:	
Employees	120,598.67
Pupil nurses	32,429.20
Temporary employees	2,800.00
Philippine Medical School	17,100.00

Statement of expenditures—Continued.

PHILIPPINE GENERAL HOSPITAL—
continued.

Subsistence supplies	P111,910.76
Commutation of subsistence and quarters	2,976.17
Light	7,212.02
Rents of telephones	1,414.22
Coal, oil, gas, and steam	8,649.21
Transportation	965.20
Office supplies	2,353.98
Laundry, hospital	35,268.09
Laundry allowances	2,613.97
Maintenance of grounds	890.83
Incidentals	4,079.14
Medicines, medical, and surgical supplies	59,587.85
Miscellaneous supplies	5,878.41
Pupil nurses:	
Laundry	1,111.74
Subsistence	16,067.39
Incidentals	1,774.49
Repairs	10,451.61
Improvement of grounds	7,029.15
Equipment	57,059.40
Total	510,027.70

BAGUIO HOSPITAL.

Salaries and wages	11,956.71
Subsistence supplies	12,103.40
Commutation of subsistence and quarters	632.64
Office supplies	154.22
Fuel	952.62
Light	565.50
Stamps	99.87
Freight	1,371.69
Medicines, medical, and surgical supplies	4,480.07
Incidentals	4,687.36
Laundry, hospital	1,233.39
Laundry allowances	508.40
Repairs	2,666.44
Equipment	5,726.80
Miscellaneous supplies	(9,118.22)
Total	38,055.89

CULION LEPRO COLONY.

Salaries and wages	26,589.58
Subsistence:	
Lepers	122,839.34
Employees	20,056.51
Stationery	170.21
Fuel and light	104.48
Gratuity to lepers	23,069.00

CULION LEPRO COLONY—continued.

Clothing	P4.50
Bedding	196.82
Miscellaneous supplies	474.09
Incidentals	1,862.90
Disinfectants	355.88
Freight	12,757.81
Collection of lepers	18,238.67
Medicines, medical, and surgical supplies	13,317.26
Stamps	57.40
Repairs	3,942.89
Real estate	1,000.00
Equipment	5,863.29
Construction	2,074.33
Stock	53,327.19
Total	301,230.21

PRISON SANITATION DIVISION.

Salaries and wages	7,967.33
Commutation of subsistence and quarters	430.16
Medicines, medical, and surgical supplies	8,798.14
Disinfectants	294.10
Laundry allowances	132.02
Total	17,582.35
Accounts payable	54,252.17

Non-Christian tribes:

Salaries and wages	2,812.00
Miscellaneous expenses	2,651.73
Equipment	2,648.29

Total	8,112.02
Suppression and extermination of epidemic diseases and pests	8,577.14
Bad accounts	64.75

Set aside for permanent improvements:

Nurses and doctors' quarters, Baguio Hospital	1,269.63
Wards, San Lazaro Hospital	4,349.01
Construction, Culion leper colony	50,000.00
Completion and equipment of the Philippine General Hospital	100,000.00
Total	155,618.64
Grand total	1,614,329.02

In addition to the foregoing statement of actual expenditures, there are the following outstanding obligations chargeable to the appropriation of the Bureau of Health and funds appropriated for same during the fiscal year 1912:

General:

Salaries and wages	P21.66
Transportation	1,394.25
Stationery and office supplies	44.50
Repairs to office and furnitures	224.34
Telephone rent	457.38
Incidentals	1,053.72
Postage	2.22
Cablegrams	154.47
Printing and binding	2,390.13
Traveling expenses and per diems of employees	243.96
Freight	329.83
Treatment of Government employees at Iloilo	753.25
Cebu Hospital	693.28
Salaries of secretary-treasurer and examination fees of boards of pharmacy and dental examiners	450.00

General—Continued.

Sibul Springs, equipment dispensary	P16.22
Miscellaneous supplies and articles of stock	100,667.35
Total	108,927.01
Inspection division:	
Salaries of medical inspector	300.00
Traveling expenses—	
Medical inspectors	49.40
District health officers	191.97
Sanitary inspectors	107.40
Transportation in the city	1,489.60
Repairs to autos	56.73
Sera	175.60
Photographs	17.40
Total	2,388.15

Vaccination division:		Culion leper colony:	
Salaries of vaccinators	P1,108.01	Salaries of employees	P350.80
Traveling expenses of vaccinators	336.65	Subsistence supplies	16,021.08
Vaccine virus	2,255.00	Collection of lepers	8,493.88
Ice for virus	84.26	Freight	820.76
		Stationery	14.89
		Incidentals	11.29
Total	3,778.92	Miscellaneous supplies and articles of stock	22,158.88
		Construction	66.67
		Total	47,936.66
San Lazaro Hospital:		Bagulo Hospital:	
Subsistence supplies	3,390.78	Subsistence supplies	2,308.43
Transportation	7.30	Freight	377.43
Telephones	110.00	Stationery	62
Repairs	2,311.02	Telephones, rent	48.00
Horseshoeing	2.10	Incidentals	2,034.88
Incidentals	76.00	Miscellaneous supplies and articles of stock	2,071.83
		Total	6,840.69
Total	5,897.21	Prison sanitation division: Salaries and wages	
		100.00	
Philippine General Hospital:		Non-Christian tribes:	
Salaries of employees	801.50	Salaries and wages	515.60
Subsistence supplies	7,509.32	Miscellaneous expenses	2,357.14
Laundry allowances	7.27		
Telephones	745.24	Total	2,872.74
Lights	4,142.37		
Transportation	163.95	Grand total	209,752.12
Gas and steam	4,966.94		
Repairs	6,193.23		
Improvement of grounds	4,061.19		
Maintenance of grounds	625.23		
Incidentals	1,162.95		
Pupil nurses—			
Salaries of	40.80		
Laundry allowance	9.40		
Subsistence	579.26		
Incidentals	105.99		
Total	31,120.74		

The following is the income of the Bureau of Health during the year:

General (including refund salaries of district health officers, sales of supplies and equipment, miscellaneous services, etc.)	P84,789.13	
General Hospital	208,752.96	
San Lazaro Hospital	3,123.10	
Bagulo Hospital	10,075.40	
Culion Leper Colony	1,321.77	
Boards of Examiners	3,802.00	
Total	306,864.36	
Of the above amount, refund to appropriation is	78,773.88	
Balance, receipts from operation	228,090.88	
Total funds made available during the fiscal year 1912	1,597,701.23	
Total expenditures	1,614,329.02	
Outstanding liabilities	209,752.12	
Total	1,824,081.14	
Receipts from operation, fiscal year 1912	228,090.88	
Total chargeable against general fund	1,595,990.76	
Total available	1,710.47	

The following statement shows the expenditures made from appropriation made by Act 2069 for the Bureau of Health for the Mountain and Moro Provinces Nueva Vizcaya, and Agusan:

Appropriated		P80,000.00
Carried from last year's appropriation		13,363.19
Total		43,863.19
Expenditures:		
Salaries and wages	P16,774.77	
Miscellaneous expenses	16,972.09	
Equipment	9,157.40	
Permanent improvement	1,677.24	
Total	44,571.50	
Receipts from operation	1,208.31	
Total chargeable against appropriation		43,863.19
Balance		None.

It must be remarked that expenditures and liabilities to the amount of ₱10,985.76 incurred in behalf of the work at non-Christian provinces during the fiscal year 1912 have been borne by the Bureau of Health proper.

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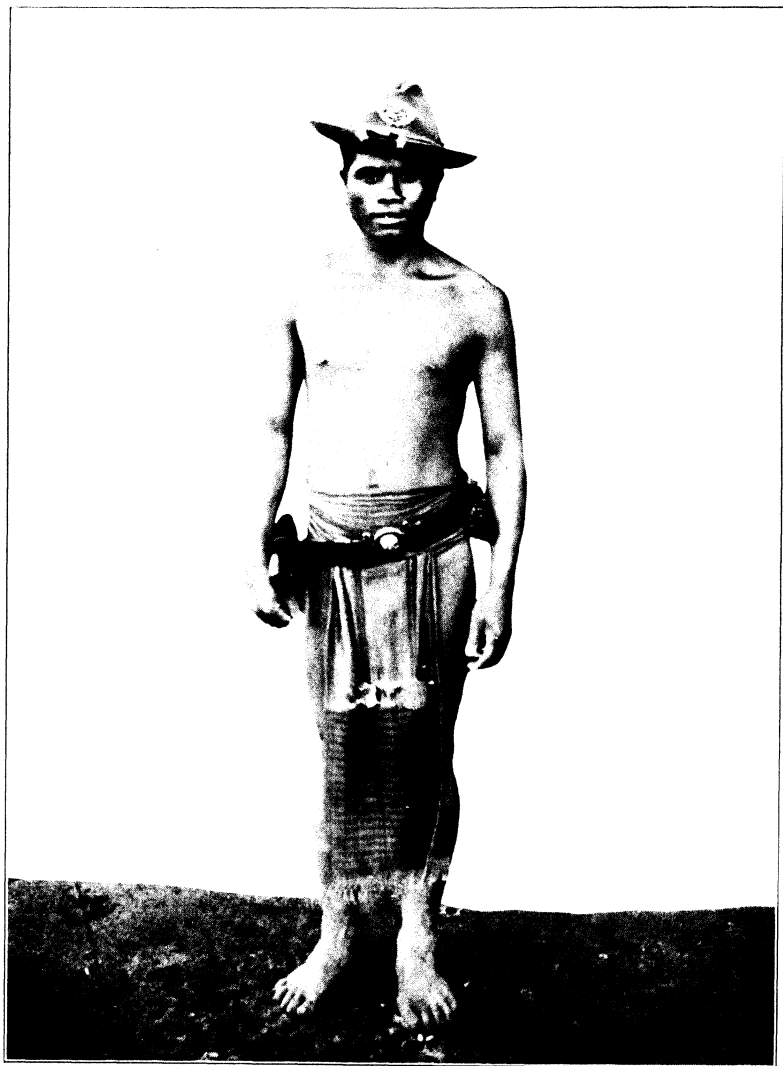
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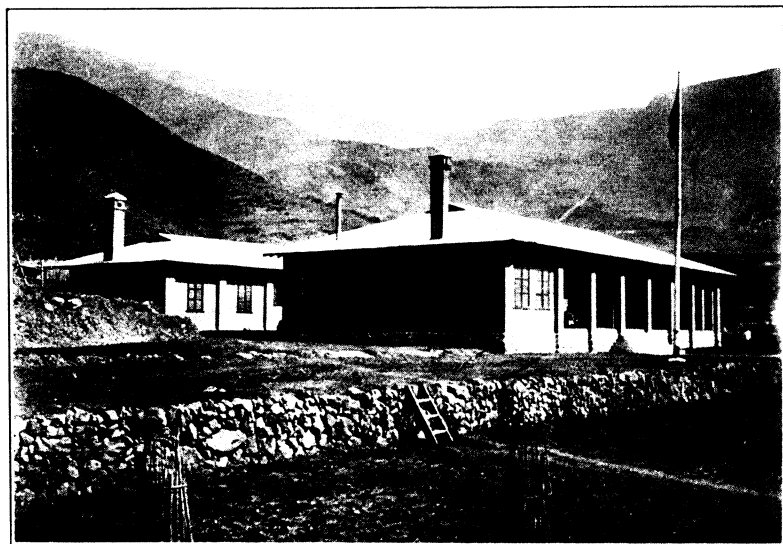
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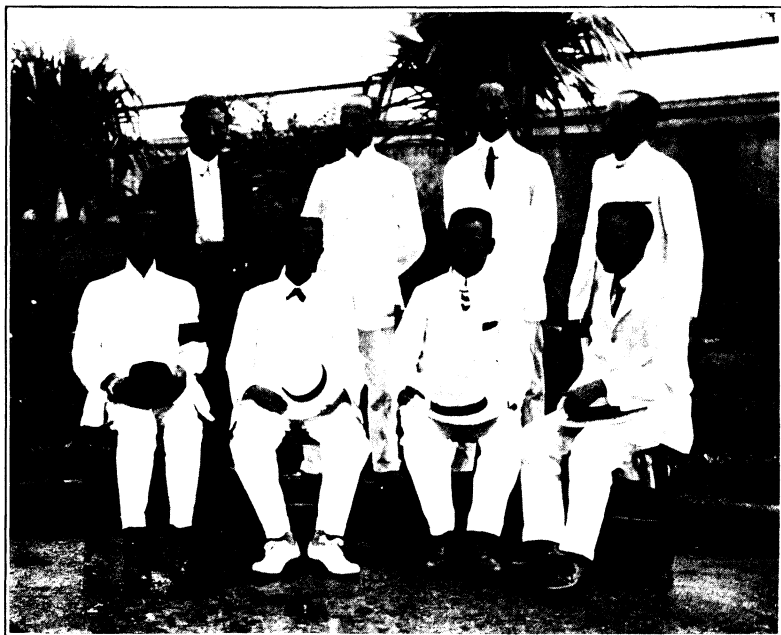


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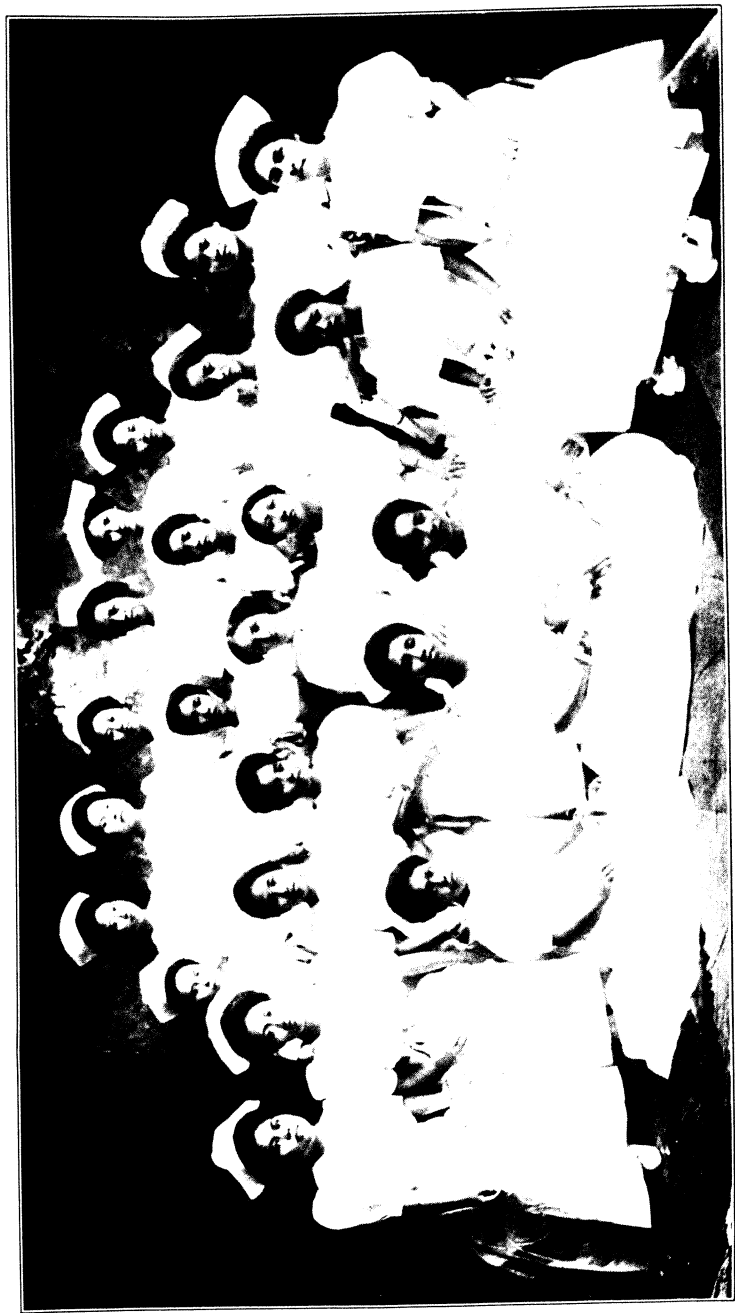
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